LITERATURE REVIEW: THE PRACTICE OF FEMALE CIRCUMCISION

Office of International Health
Public Health Service
Department of Health and Human Services

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Prepared by

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The purpose of this paper is to provide a concise and up-to-date survey of available data on the practice of female circumcision. It includes such information as the prevalence of the practice, its geographical distribution, the sociocultural basis, and deleterious effects to health and well being resulting from the practice.

The paper has two parts. Part I includes a summary of the literature, defines the various types of female circumcision, its geographical and age distribution, and the sociological implications and health complications arising from the practice. Part II presents a bibliography of the available literature. Detailed abstracts of each of these bibliographic entries are given and a special section is reserved for those articles mentioning specific case studies. Articles which contain extensive data or research methodology are presented in full.

The task assigned to OIH was to review articles on the health and medical aspects of female circumcision in medical and scientific literature available in the United States. Most of the references cited were obtained through a Medline Computer search which cited articles through April 1980. Other sources cited were derived from the footnotes and bibliographies of the initial articles. Their content was reviewed for medical soundness by two physicians within this Office. This survey does not contain articles on the subject which may have appeared in such popular magazines as People, Ms. nor those in a foreign language, other than French.

This literature review was prepared within the Division of Program and Policy Analysis of the Office of International Health, Public Health Service, U.S. Department of Health and Human Services at the request of the Bureau for Africa, U.S. Agency for International Development, AID.
TABLE OF CONTENTS

PREFACE ................................................. v
PART I REVIEW OF THE LITERATURE ................. 1
  A. INTRODUCTION .................................... 3
  B. DEFINITION OF FEMALE CIRCUMCISION .......... 5
  C. GEOGRAPHICAL DISTRIBUTION .................... 7
  D. AGE DISTRIBUTION ................................ 11
  E. SOCIOLOGICAL IMPLICATIONS ..................... 12
  F. HEALTH COMPLICATIONS ........................... 13
  G. CONCLUSION ...................................... 15

PART II BIBLIOGRAPHY ................................. 17
  A. SUMMARY OF SOURCES ............................. 19
  B. ABSTRACTS .................................... 23
  C. CASE STUDIES ................................ 105

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I. REVIEW OF THE LITERATURE

A. Introduction

The practice of female circumcision is of great antiquity, having been known to the ancient Egyptians and practiced by the Arabs in pre-Islamic times. Today, infibulation and other genital mutilations are still practiced in Asia and Africa.

However, female circumcision, its resulting medical complications and their treatment are relatively unknown to medical science. Medical research and teaching centers in non-tropical countries often are totally ignorant of this problem. This lack of medical knowledge can be attributed to the geographical distribution of the practice, the secrecy associated with it and the tendency to guard it from Western curiosity, and the fact that most women suffering the medical consequences live in isolated rural areas not reached by modern health care services.

The Medline Computer Search provided about 50 articles. The majority are from medical journals. They provide case studies describing the serious medical complications resulting from female circumcision, particularly the Pharaonic type. They provide estimates of the magnitude of the various ill effects attributed to the practice, including infertility, infection, psychological damage, gynecological and obstetrical problems. They do not substantiate these estimates with statistical data.

None of the literature surveyed had specific morbidity and mortality data related to female circumcision. Apparently, hospital records are not kept on the medical complications of female circumcision. Some unpublished epidemiological studies were reported by African researchers at the WHO sponsored seminar on traditional medicine at Khartoum.

The literature surveyed includes articles on the geographical distribution of the practice and the ethnic groups involved. It does not provide statistical data to show how widespread the practice is within each country nor the proportion of the population that actually participates in the practice. In countries where female circumcision has been prohibited, data are not collected on the extent of the practice. In countries where the practice is permitted, official data are not available either.
From the literature surveyed, information has been summarized on the definition of female circumcision, on its geographical and age distribution, and on the sociological and health implications of the practice.
B. Definition of Female Circumcision

Female circumcision is the term most frequently used for a variety of genital operations performed on female children and young girls in accordance with traditional beliefs and custom. The severity of the operation depends on the particular village or tribe. It is usually performed by a traditional midwife in the presence of female relatives.

The operations practiced can be categorized into four types.

Type I: The Sunna circumcision or clitoridectomy consists of the excision of the glans clitoridis, sometimes including a small portion of the clitoris itself. The cutting of the prepuce of the clitoris is a delicate operation that requires surgical tools and good lighting. It is questionable that the old women who operate, mostly with razor blades or knives, would be capable of performing such a delicate procedure.

Type II: The radical Pharaonic circumcision or infibulation aims at closing or narrowing the introitus. It is supposed to promote chastity and protect the virginity of girls by making forced intercourse impossible. No anesthetic is used and the girl is held down by her relatives while the midwife proceeds with her operation. With a sharp razor, the clitoris is amputated and slices of the labia majora and labia minora are pared away. The amount of tissue removed and the damage done depends on the experience of the midwife. Bleeding is always profuse and is controlled by digital pressure. The wounds on the two sides are brought into opposition by tying them together for forty days. Some tribes use thorns inserted transversely through the wound edges and the thorns are held in place by a piece of thread wound around the projecting edges. A match stick is inserted in the center of the wound to allow the development of a fistulae for urination. The raw area is covered with cotton soaked in oil or saline. The match stick is removed daily for urination and reinserted until the wound heals. This operation was considered by authors to be
the most common type. It is now illegal and prohibited by Islam, though the extent to which such prohibition has diminished this form of circumcision is not known.

Type III: This operation is a modification of Type I and Type II. It is now considered the most common type of operation performed. It is illegal, but it is performed illicitly by some trained midwives. It consists of excision of the clitoris with slices of the upper part of the labia minora. The labia majora is preserved leaving a slightly narrowed introitus. Local anesthesia is used and the wound is neatly sutured with catgut. Prophylactic antibiotics are usually administered when performed in a hospital. For both the Type II and III operations, the bride must be cut open for intercourse, because consummation of the marriage is nearly impossible because of the surgically created barrier. Therefore, in most marriages, the husband, or one of his female relatives, enlarges the vaginal opening with a small knife so that sexual intercourse can take place. It is the responsibility of the husband's female relatives to examine the bride a few weeks after the marriage, and, if necessary, to enlarge the vaginal opening to permit intercourse. At childbirth more cuts are needed, for without such help both mother and baby are at risk.

Type IV: Recircumcision or reinfibulation is the fourth type. In the past, this was performed on widows and divorcees and on occasions for narrowing the vagina when it had become patulous after repeated childbirth. Of late, it is believed to have been performed as a contraceptive measure.

For more complete descriptions of female circumcision as it is practiced in Africa and the Middle East see Bibliographical abstracts (Arthur, 1942; Bowesman, 1960; Cook, no date; Hosken, 1976; Sequeira, 1931; Verzin, 1974; Worsley, 1938).
C. Geographical Distribution

Circumcision of women has a wide geographical distribution. A relationship does exist between the countries and the types of circumcision practiced. The nations and groups which practice some form of female circumcision are summarized in the following passages:

1. Africa - Many Bantu tribes in South and Central Mozambique, Egypt, Sierra Leone, Katanga, Kenya, Congo, Zaire, Nigeria, Ghana, Ethiopia and Sudan.

2. Asia - Kamchatka, Indian Archipelago of Malaysia, Muslims of Malaysia, Alfuera Archipelago, some Muslims of Pakistan, and a few small groups of nomads in the Arabian Peninsula.

Female circumcision of varying degrees has also been reported, though not verified, in Brazil, Eastern Mexico, and Peru as well as in Australia.

Infibulation or Pharaonic Circumcision (Type III) is practiced throughout Somalia and all areas inhabited by ethnic Somalis; the Sudan—except for the Southern Province; Ethiopia, all along the Red Sea Coast, Eritrea; Northern Kenya; Southern Egypt; Djibouti. In West Africa it is practiced in Northern Nigeria and throughout Mali. Outside Africa it occurs among the Malaysians.

EXCISION (Clitoridectomy) is practiced:

East Africa: Sudan, Ethiopia, Kenya, Northern Tanzania, Part of Uganda, Egypt.


Central Africa: Niger, Chad, Central Africa, Northern Zaire.

The severity of the operation depends on the particular village or tribe. While more areas in Africa may be involved, no documentation or medical sources are presently available.

A more complete listing of populations in Africa which are, reportedly (within the last 20 years), still
continuing the practice is given in Table A at the end of this section. These areas are further cited in these abstracts: Lenzi, 1970; Verzin, 1974; Bowesman, 1960; Brisset, 1970; Cook, no date; Hayes, 1975; Kennedy, 1970; Modawi, 1973; Mustafa, 1966; Pieters, 1977; Sequeira, 1931; Silberstein, 1977; Taba, no date; Worsley, 1938.
TABLE A

To establish present-day conditions, only recent sources are used (mostly within the last 20 years). Geographic areas are included and marked with *. Names given here are as recorded in the sources used.

| ARABIAN PENINSULA: Nagd, Kuwet, Muntafir, Bani, Tamin, Sammar, Mahra, Kara, Sahara, Bautahra, Bani Atije, Agarnem, Adwan |
| BENG: Benin |
| BOTSWANA: Xhosa, Shangaana-Thonga |
| CHAD: Shuwa |
| CENTRAL AFRICAN EMPIRE: Recently outlawed |
| DJIBOUTI: Afar, Issa (entire population) |
| EASTERN AFRICA*: Somali, Meru, Embu, Chuka, Kikuyu, Rangi, Nandi, Masai, Kamasia, Pokot, Elgeyo, Njamps, Dorobo, Sebei, Digo, Taita, Girama, Kisi, Kamba, Swahili, Chaga, Pare, Gogo, Arusha, Tatoga, Turu, Bena, Hehe, Watusi, Xhosa, Suba, Wasembeti, Nilo-Hamitic population groups |
| ETIOPIA: Amhara, Fellasha, Kafitscho, Oromo (Galla), Danakil, Tigre, Omezo, Hamitic Kafa, Babia, Sidamo, Kushite population groups, Somali of the Harrar area* |
| EGYPT: All population groups (Muslim and Copt) except for educated, urban upper and upper middle class |
| GAMBIA: All population groups except Jolloff |
| GHANA: Hausa, Mosi, Yoruba, Kassina, Nankan, North Ghanaian groups |
| GUINEA: 24 ethnic groups, including Foulah, Peul, Malinke (Mandingo), Soussou, Bambara, Kasonke, Serer, Wolof, Conakry area* |
| KENYA: Masai, Kuria, Kisi, Nandi, Kipsigs, Kamba, Kikuyu, Digo, Taita, Girama, Dorobo, Sambaru, Kamasia, Elgeyo, Pokot (Suk), Embu, Meru, Terik, Marakwet, Chagga, Kavirondo, Watende, Wakamba, Kitosha, Lumbwa, Somali population groups |
| IVORY COAST: Malinke, Dioula, Guere, Guro, Baule, Mwan, area of Odienne* |
| MALI: Bambara, Dogon, Mossi, Malinke, Saracole, Songhai, Peul |
| MAURITANIA: All population groups |
| MOROCCO: No confirmed information. |
| NIGER: Over 80% of population groups |
| NIGERIA: Yoruba, Esik, Shuwa, Ibo, Hausa, most population groups except Itsekiri; inhabitants of Cross River State* |
| SENEGAL: Malinke (Mandingo/Wangara), Toucouleur, Peul (Fulani), Soce (Casama) |
| SIERRA LEONE: All population groups except Creoles, including Temne, Mende, Loko, Limba, Kono, Kran, Susu, Fullah, Mandingo |
| SOMALIA: All population groups practice infibulation, including Harrar, Afar, Danakil, Galla (Oromo) |
| SOUTHERN AFRICA*: Xhosa, Shangaana-Thonga, Betchuanaland* |
| SUDAN: Beja, Hadadana, Beni Amir, Kababish, Baggara, Danagla, Shagia, Gaaliyen, Rubatab, Amarar, Pallata, Bushairiya, Rashyda, Dongola, Hassanie, Bisharin, Ababde, Mensa, Hababa, Sung Burun, Abn Haraz, Musalum Iye, Awlad Kahil Hassanie, Singa, Sinnar, and many more; Gezir * and Khartoum province *, Gumurman area*; Nubia *), Red Sea Coast ports *), Wad Medani *), Humor of West Sudan *) |
| TANZANIA: Masai, Basembeti-Suba, Sakuria, Komaki, Chaga, Pare, Shambala, Gogo, Rangi, Turu, Bena, Hehe, Nilo-Hamitic population groups |
| TOGO: Not specified |
| UGANDA: Sebei |
| UPPER VOLTA: Mossi, 50-70% of female population, according to medical sources |
| ZAIRE: M'Bwake, Banda |

Source: Fran Hosken, Women's International Network News, 187 Grant Street, Lexington, Mass. Documentation giving all sources from which this list is compiled is available from Fran Hosken, WIN.
DESCRIPTION: This map is based on documented, medical evidence (Fran Hosken, *IN Ne:*).

The diagonally-shaded areas are where excision is practiced. The cross-hatched areas show where infibulation is documented.

Since population groups are not restricted to political boundaries, and many are migratory, these practices are spread into adjoining areas. It must be remembered that there is a very large desert and savannah area, which is very sparsely inhabited from the Sudan westward to Mauritania. This area is crossed by Moslem pilgrims going from West Africa to Mecca and back.

To establish which population groups subject their female children to genital mutilations, it is necessary to go to maternity stations and hospitals to record the facts directly from midwives and physicians.

It is unknown, at present, how far South and North these operations are practiced and can be established only by field work. This list is not complete, but will be updated as more documentation becomes available.

* This evidence may be 20 years old, much of it is reported but unsubstantiated.
D. Age Distribution

The age* at which female circumcision is performed varies from area to area and can be briefly summarized as follows:

8th day after birth
10 weeks after birth
3-4 years (Type I and II)
3-8 years
5-8 years
8-10 years (Type III)
14-15 years
Shortly after marriage
After bearing children

Ethiopia
Arabia
Somalia
Egyptian Copts
Sudan
Somalia
Bantu tribes
Masai
Some Swahili-speaking tribes;
Guinea

* Source: (Verzin, 1974; Modawi, 1973; Lenzi, 1970)
E. Sociological Implications

The essential object of circumcision in females is uncertain and, therefore, many suggestions have been made to account for the practice. There is little doubt that the main impetus which keeps it going is the mysticism of a ritual initiation to full membership of social groups.

The reasons set out to justify the custom are listed below:

- Decrease of sexual tension
- Safeguard virginity
- Hygiene
- Prevention or reduction of labial hypertrophy
- Mystical and religious motives
- Legal reasons
- Religious influences
- Increased fertility

Infibulation is practiced mostly in devout Moslem areas to guarantee chastity "visibly." Initiations involving excision and clitoridectomy are also practiced by Christian converts. In the past, some of the Protestant missionaries vehemently opposed these operations, particularly in Kenya.

F. Health Complications

Health damage to the women from circumcision depends on the kind of operation and the hygienic conditions under which it is performed.

The immediate complications to be expected from female circumcision of any type include:

- shock which may be neurogenic, or due to hemorrhage;
- hemorrhages which may be fatal, primarily occurring from the perineal branches of the external pudendal artery and the dorsal artery of the clitoris or may follow infection of the wound;
- injuries to adjacent structures, urethra, bladder, vagina, perineum and anal canal;
- infections such as urethritis, cystitis and abscesses; and
- retention of urine which may be caused reflexively, immediately after the operation. (This may follow urethral strictures when the urethra is infected or injured, or occlusion of the external meatus by a skin flap.)

The later gynecological complications are:

- infertility due to chronic pelvic sepsis, and the inability to have sexual intercourse;
- implantation dermoids and abscesses;
- dysmenorrhea due either to chronic pelvic sepsis or to obstruction of the menstrual flow by a pinhole introitus;
- keloid scar formations; and
- delays in the onset of menarche.

Other complications are:

- malformations of external genitalia;
- coital difficulties;
o urinary disturbances; and
o psychological changes.

**Obstetric complications are:**

- difficult vaginal examinations;
- difficult catheterizations;
- inert labors;
- anterior episiotomies; and
- fistulas.

**Defibulation complications are:**

- damage to the urethra;
- perforation of the vescio-vaginal septum; and
- damage to the rectum.

Actual case studies included in the bibliography present a thorough analysis of several of the above mentioned complications (Asuen, 1977; Bitho, 1975; Daw, 1970; Dewhurst, 1964; Hathout, 1963; Onuigbo, 1974; Laycock, 1950).

Further major descriptions of the health complications due to female circumcision are presented in the following abstracted articles: Arthur, 1942; Cook, no date; Girgis, 1977; Hosken, 1976; Lawson, 1967; Lenzi, 1970; Lynch, 1963; Modawi, 1974; Mustafa, 1966; Ogunmodede, 1979; Pieters, 1977; Taba, no date; Verzin, 1974.
G. Conclusion

This survey of the literature on female circumcision provides a considerable body of knowledge on the various types of operations practiced and the medical complications incurred in Pharaonic circumcision. It provides a considerable body of knowledge on the geographic regions where female circumcision is practiced and the ethnic groups involved. It provides some estimates of the numbers of women and children at risk. These estimates are based on opinions and judgements of the authors. They are not substantiated by statistical data and analyses.

The literature surveyed therefore does not provide a solid assessment of the magnitude of the problem nor of its relative importance in determining the health status of women and children in those countries concerned. It does, however, indicate that medical institutions and health personnel in countries where female circumcision is practiced should be alerted to the health risks involved; that assessments of the problem might be carried out most effectively and appropriately at the country level; and that international assistance agencies should support the countries initiating such efforts to address the problems.
II. A. SUMMARY OF SOURCES


Cook, R. Damage to Physical Health from Pharaonic Circumcision (Infibulation) of Females. A Review of the Medical Literature. WHO Regional Office for the Eastern Mediterranean, Alexandria, Egypt. (Date not known).


Hosken, Franziska P. "The Epidemiology of Female Genital Multilations." Tropical Doctor 8 (July 1978): 150-56.


----------. "Female Mutilation in Somalia Tests 'Human Rights' Doctrine." Politicks and Other Human Interests 14 (May 9, 1978).


Lowenstein, L.F. "Attitudes and Attitude Differences to Female Genital Mutilation in the Sudan: Is There a Change in the Horizon?" Social Science and Medicine 12 (5A) (September 1978): 417-21.


Taba, A.H. "Female Circumcision." A Review of the Medical Literature on Pharaonic Circumcision focusing on Physical Health Damage. Can be obtained from Dr. Taba, Regional Director, WHO Regional Office for the Eastern Mediterranean. P.O. Box 1517, Alexandria, Egypt. Year not noted.


Young, E. Hills, "Female Circumcision in the Sudan." Nursing Mirror (March 12, 1949): 377-78.
I. B. ABSTRACTS

Arthur, John W. "Female Circumcision Among Kikuyu." 

The author, in a letter to the correspondence section of the Journal, describes the operation as it existed (in 1942) among the Kikuyu tribe in Kenya.

"It involves the removal of not only the clitoris, but also of the labia minora and half of the labia majora together with the surrounding tissue, resulting in permanent mutilation affecting the woman's natural functions in micturition, menstruation and parturition, with disastrous results not only to the birth rate, but also to the physique and vitality of the tribe."

The author then discusses the health effects of the operation including profuse bleeding, extreme inflammation and extensive cicatrization of affected parts at the time it is performed. Later complications include interference with normal menstruation and prevention of coitus.

His knowledge of the operation and medical effects seem to have been gained from experience in mission hospitals in Kenya. There, he says, plastic surgery to relieve complications arising from female circumcision were commonplace. He also discusses the necessity for doctors in the Mission hospitals to make several incisions to enable children to be born to these women. Without the incisions labor is always delayed (he says) and the mother and/or child often die.

The author presents no data, case studies or evidence beyond his own observations on the consequences of the practice. No mention was made of the number of years he served or which hospitals he worked in while in Kenya.
This article examines the social implications of female circumcision. The author discusses the definition and prevalence of the practice in Egypt, its origin, relation to Islam, and legal status. She also interprets the justifications for the practice within the Egyptian value system and summarizes current research. As an Egyptian social scientist, the author suggests some guidelines for research to deal with the cultural, psychological and social aspects of the practice based on her own preliminary investigation. Case studies of a pilot project to discover the present extent of the practice in Egypt and to determine women's willingness to talk about their personal experiences are also included.

With regard to its relation to Islam, the author quotes several religious leaders and a 1950 religious edict about female circumcision. According to these sources, Islam sanctions the practice of Sunna circumcision (removing the prepuce of the clitoris only) because of its effect on attenuating the sexual desire in women. There are differences of opinion between religious leaders as to whether the practice is a duty or just tradition.

The legal status of the practice in Egypt is ambiguous. The author states that there is no written confirmation of the existence of any law prohibiting the practice. In June 1978, a resolution by the Maternal and Child Health Department forbade the performance of the operation in Ministry of Public Health units and specifically forbade dayas (traditional midwives) to perform the operation. No information is available to determine the effects of this resolution. The author also says there is no evidence of disciplinary measures taken against dayas and others who disregard it.

According to Assaad, women who believe in female circumcision are not normally conscious of the religious or legal views on the subject. The main reason given by women is that the practice protects the woman against her oversexed nature, saving her from temptation and disgrace. Another reason is that a woman is not fully a woman unless her external genitalia are removed.

According to the author, while many educated women refuse to submit their daughters to such operations the far greater number of poor, uneducated women in Cairo still follow the practice. Because educated women don't realize the extent of the practice, women's organizations such as the Cairo Women's Club, the Young Women's Christian Association and the Cairo Family Planning Association have never considered including female circumcision among their concerns.
The author's conclusions stem from a pilot study conducted in 1979 over a one week period. Her interviews consisted of all the women who within one week (four morning sessions) availed themselves of the family planning center in a low income housing area in Cairo. The 54 respondents were all Egyptians. Fifty-two were Moslem and two were Christian. All were married and between ages 20-60 years. Sixty-six percent were aged 25-39. The majority were illiterate. The interview with each patient was administered by the paramedical staff of the center and included family history, description of excision experience, marriage and sexual experience, daughter's excision and respondents perception of other people's view of the practice.

Of the 54 women interviewed, 49 were circumcised. Of these, 23 women had their daughters circumcised and 17 intended to do so. According to the gynecologist at the clinic almost all the women's operations were of the Sunna type. Of the women who had been circumcised, 40 said that a traditional practitioner (daya, gypsy or barber) performed the operation; six named a physician; and three said it was done by trained nurses.

With respect to immediate complications, 43 of the 49 circumcised respondents experienced fear, severe pain, bleeding, inflammation and urinary disturbances. Forty-six of this group reported they enjoyed sex and were happy with their husbands.

Respondents' perceptions of approval or disapproval of the practice by husbands, men in general, dayas, physicians, religious leaders, and the government indicate that there is uncertainty about other people's views. According to the author, this suggests there is room for changing attitudes towards the practice by enlisting the support of such groups as physicians and government officials.

The author suggests concerted efforts in the following areas to eradicate the practice:

1. Multidisciplinary research should be promoted to determine what information will be persuasive to men and women in eradicating female circumcision.

2. Health practitioners and educators engaged in outreach programs should form the first audience for instruction because of this group's potential for leadership.

3. Discussions of the practice should be included in other ongoing programs whether they are family planning centers, MCH centers, women's clubs or youth clubs.

4. Ways should be determined to convince the daya to use her influential role to work for change.

Dr. Bowesman practiced in West Africa in the Gambia and Ghana. In this chapter he discusses the possible reasons behind the ritual.

1. To ensure chastity before marriage.
2. To decrease the risk of mania-nymphomania.
3. To reduce sex feelings and masturbation.
4. To improve and facilitate cleanliness.
5. For the purpose of increasing fertility.
6. On aesthetic grounds where the structures are hypertrophic.
7. To remove obstruction to sexual intercourse, where lesser labia are very large.
8. To tighten the vagina, increasing sexual feelings.
9. As ritual initiation into social groups, tribes, religious orders, etc.
10. To confer the right to speak at public meetings in some tribes.
11. To permit admission to the mosque in some communities.
12. Because girls cannot get husbands in some tribes without circumcision.
13. To attain the right to inherit property as in ancient Egypt.
14. To avoid the "disgrace of the uncircumcised" where the practice is customary.

His opinion, gained from personal observation, is that the most likely reason for its origin was originally to remove obstruction to the vagina caused by excessively large clitoris and lesser labia in people who show a natural tendency to hypertrophy of these parts.

Next, he explains 5 different procedures which may be used to undertake female circumcision.

1. Removal of the clitoris alone.
2. Excision of the clitoris and the lesser labia.
3. Excision of the clitoris with incision of the lesser labia edges followed by suture of the two sides causing infibulation of the upper two-thirds of the vagina.
4. Excision of clitoris and lesser labia with an additional lateral incision on each side of the lower third of the vagina. This is termed circumcision with "introcision" or incision about the introitus.
5. Massive excision of clitoris, lesser labia and part of major labia with suture of the two sides,
leaving only a pencil-sized opening at the inferior commissure position to permit escape of urine and menstrual blood.

In discussing medical complications which arise, he says that scar tissue may interfere with childbearing. Also, the development of a growth-like mass of mycetoma origin is common as a result of the practice of using thorns from bushes to suture the incised labia together.

Keloid formation may also occur, interfering with stretching of the parts in childbirth.

While the author did not personally see cases of infibulation in West Africa, he says that the ensuing necessity for extensive defibulation before childbirth may cause complications. Defibulation during childbirth is dangerous because of the extensive blood supply present in the local parts at that time. Also, in the process of the operation, the urethra may be damaged or the vesicovaginal septum perforated. Damage to the rectum is also a serious complication occurring with defibulation.

The author also includes an extensive list of where the practice is found in Africa. (see Table B).
TABLE B

Female Circumcision in Africa

This practice is widespread amongst African peoples. It varies in extent and is closely associated with the tribal system. In some tribes the practice is ritual and customary and undertaken on all females while in other tribes only a small portion of the females are circumcised.

The practice is found in the following communities:

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<th>North Africa</th>
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<th>Central Africa</th>
<th>South Africa</th>
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<td>Fullani</td>
<td>Somali</td>
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<td>Kordofan</td>
<td>Mandinga</td>
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<td>Gulla Agan</td>
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This very limited list has been compiled from the personal experiences of Charles Bowesman, working in West Africa, and from various articles dealing with gynecology in African patients elsewhere. This list might be added to as information becomes available. It indicates only that female circumcision is a comparatively common practice in many parts of Africa. No attempt has been made to collect details from other parts of the world. The practice is well known in the Middle East and to a limited extent in Southern Asia. It is common in some parts of South America.

This article relates the proceedings of a WHO international conference entitled "Traditional Customs Affecting Women's Health," held in Khartoum. Experts at the meeting decided that the mutilation can be grouped into 3 categories. 1) The mildest form consisting of slicing off the tip of the clitoris with a sharp instrument, usually a razor blade. It is by far the least widespread. 2) The form most widespread is clitoridectomy, excising the whole of the clitoris as well as the inner lips. One of the experts, Fran Hosken of WIN, stated that this form is practiced in over 26 African countries extending from the Horn of Africa and the Red Sea right across to the Atlantic Coast (Senegal and Mauritania), and from Egypt in the north to Tanzania in the south, including most of Nigeria. Another participant, Awa Thiam of Senegal, stated that it is also found in the two Yemens, Saudi Arabia, Iraq, Jordan, Syria and southern Algeria. 3) The most radical form is infibulation which involves removal of the clitoris and the inner lips and then sewing up the labia majora. This is standard in the whole of the Horn of Africa - Somalia, Djibouti, in most of Ethiopia, Sudan, Upper Egypt, northern Kenya, Nigeria, and in many areas of Mali, according to Ms. Hosken.

Numerous complications were cited. A clumsy or awkward cut can pierce the bladder or rectum. Dr. Shandall of Khartoum University described other complications: shock, hemorrhage, infection, urine retention, later chronic genital infections, sterility, cysts and stones, need for episiotomies, vesiculovaginal and rectovaginal fistulas, and frigidity.

The idea of female circumcision is not "typically" African, Middle Eastern or Muslim. Some South and Central American tribes though rare-in Brazil, Peru, and Mexico-also practice a form of excision, as do certain ethnic groups in Malaysia and Pakistan and the Australian Aborigines, according to Fran Hosken.

The primary reason for the practice, cited by the Congress, was to insure female virginity and chastity. It was also used to shield women from their own desires.

The resolutions adopted in the WHO Conference were the following:

- adoption of clearly defined national policies for the abolition of excision and infibulation;
- establishment of national and international committees to coordinate these policies; and
- general education of the public, especially of traditional midwives.
The author discusses the political controversy over the attempt by the British to abolish female circumcision in Kenya in the 1930s.

In 1929, the Tumutumu Conference of all Protestant churches in Kikuyuland, Kenya resolved to take strong action against female circumcision by suspending from the church all who practiced or condoned the custom. Four medical doctors working in Kenya signed a Church of Scotland memorandum describing the operation (infibulation type) and the results of it as seen during their medical tenure in Kikuyu Province.

The Kikuyu Central Association (KAC) formed in 1920 defended the custom, seeing the attack as a threat to tribal unity. Jomo Kenyatta led this opposition.

An attempt to regulate the practice by allowing only skilled women to perform it was a complete failure.

With the support of Malinowski at the London School of Economics, Kenyatta published his book Facing Mt. Kenya which advocated the continuance of the practice of infibulation as part of an "institution which has enormous education, social, moral and religious implications . . . in perpetuating the spirit of national solidarity" in Kenya.

The British were not successful in their attempts to outlaw the practice.
Infibulation of females is initially described in the report, which is mainly practiced today in Somalia, the Sudan and parts of Ethiopia. Additionally, the adverse health consequences are described. Types of circumcision described include:

- **Sunna circumcision** or the circumferential excision of the clitoral prepuce. According to this author, no adverse consequences have been reported.

- **Excision** involving the removal of the clitoris itself together with the adjacent parts of the labia minora, or even the whole of the labia minora.

- **Infibulation** or Pharaonic Circumcision involving excision of the clitoris, the labia minora and at least the anterior two-thirds of the labia majora. The two sides of the vulva are then stitched together by silk, catgut sutures of thorns, obliterating the vaginal introitus except for a very small opening posteriorly to allow exit of urine and menstrual blood. This type has the most adverse consequences for health.

- **Introcision** or enlargement of the vaginal orifice at puberty by tearing it downwards manually, or splitting of the perineum with a stove knife is known to have been (and still may be according to the author) practiced by the Pitta-Pitta Australian aborigine tribe.

The author looks at two countries where he believes infibulation is most prevalent: Sudan and Somalia. He says that it is practiced widely in Northern Sudan though not in Southern Sudan. The author says that the practice is almost universal in Somalia. He attributes his information on the distribution of this practice to secondary sources (journal articles). He does caution the reader that, because the operation is illegal in the Sudan, there is no data collection on its prevalence nor are there any statistical data on prevalence in Somalia.
Citing medical literature sources, the author lists physical health complications such as:

**Immediate**

- Shock due to pain and/or hemorrhage
- Infection of the wounds
- Urinary retention
- Damage to urethra or anus
- Hematockopos

**Gynecological and Genito-Urinary**

- Keloid formation
- Implantation dermoid cysts, including abscesses
- Chronic pelvic infection
- Calculus formation
- Dyspareunia
- Infertility
- Urinary Tract Infection
- Difficulty of micturition

**Obstetric**

- Perineal lacerations
- Consequences of anterior episiotomy including:
  - blood loss
  - injury to bladder, urethra or rectum
  - late uterine prolapse
  - puerperal sepsis
- Delay in labor and its consequences:
  - vesico-vaginal, recto-vaginal fistulae
  - fetal loss
  - fetal brain damage

The author draws heavily upon a U.S. expert, Fran Hosken's views on female circumcision and quotes her directly throughout the article. Three types of operations are described: 1) female circumcision - mild form, somewhat similar to male circumcision; 2) clitoridectomy - ablation of the entire clitoris and labia minora; and 3) pharaonic circumcision - the whole of the clitoris, labia minora and part of labia majora are removed and the wound is sewn up, leaving only a small orifice.

Female circumcision and excision were practiced in ancient Egypt; Arabs began to practice excision before the rise of Islam. The Islamic religion condemns pharaonic circumcision, considering it a mutilation, while simple female circumcision is considered an embellishment and is sometimes called Sunna (traditional) circumcision.

Mrs. Hosken is quoted as saying that "according to conservative estimates 20 to 30 million women in Africa are sexually mutilated. No official records exist, nor are direct fatalities ever recorded."

It is thought in that part of the world that circumcision helps fertility. However, Mrs. Hosken states that the opposite is true. Often infections occur that might result in sterility, while the scars of pharaonic circumcision can make childbirth difficult and sometimes fatal.

Mrs. Hosken and others are working to make women aware of possible consequences and a WHO Conference was held in Khartoum in 1978. However, because of the attitudes of the women living in cultures where such rites are practiced, many of the women accept the tradition and want such operations for their daughters, according to the author.

It is mentioned that few African governments have taken steps against the operations. "Although the practice is forbidden in the Sudan, Egypt and Somalia, these governments ... found it very difficult to stop it, because among many social groups a girl cannot marry if she is not operated on." (Mrs. Hosken).
At the 30th World Health Assembly in Geneva, attention was brought to the two-fold activities of WHO concerning infibulation or pharaonic circumcision. This brief article highlights WHO goals in the following manner: 1) inclusion in the training of health professionals information about the ill effects (physical as well as mental) of the practice on health; and 2) collaboration in gathering information to try to establish where and to what degree it is practiced today. WHO's involvement in the prevention of this problem is being carried out as part of its programs aimed at improving the health of women and children throughout the world.

This brief editorial begins by citing Dr. A. H. Taba, Regional Director of WHO's Eastern Mediterranean Region, on the hazards of female circumcision: "It is self-evident that any form of surgical interference in the highly sensitive genital organs constitutes a serious threat to the child, and that the painful operation is a source of major physical as well as psychological trauma."

The practice today is still carried out in a number of African countries and, to a lesser extent, in southern parts of the Arabian Peninsula, in Malaysia, and in Indonesia. Deriving from a constellation of beliefs, traditional customs, and social values, it is generally associated with special ceremonies and follows certain traditional rituals, but seems neither to have a religious significance nor to be an initiation rite at puberty, according to the news brief. It is also stated that efforts are being made by WHO to abolish the practice in all its forms.

In conclusion, mention is made of the 1979 WHO seminar on traditional practices, affecting the health of women and children, held in Khartoum, Sudan. This seminar called for greater general education of the public about the dangers and undesirability of female circumcision, and for more intensive education programs to make traditional birth attendants, midwives, healers, and other practitioners of traditional medicine more aware of the harmful effects.
Dr. Girgis is a consulting psychiatrist in Cairo, Egypt. In this article he summarizes the developments in the psychiatric and mental health fields during the last decade - brief summary on female circumcision is included since the author felt that it constituted an important mental health problem in its own right. Dr. Girgis stated that the practice was universal among rural and also urban populations with the exception of the better educated groups of the population. The operation involved the partial or complete excision of the clitoris and is usually performed at the age of 7 or 8; rarely, it is delayed until puberty or shortly after. The practice was justified on the basis of enforcing chastity before marriage and tempering the intensity of the sexual desire in woman, as it was believed that the warm weather intensified sexual desire.

The psychological implications of this operation were tied in with the fancied dangers and feelings of guilt associated with female sexuality and the morbid fear of sex. These lead to aversion and frigidity on the one hand, or repeated frustrations and their subsequent physical and mental injury on the other hand.

Although the author presents no evidence to substantiate his convictions or an explanation as to how he arrived at his conclusions, he makes an interesting and debatable point in his paper. "The fight against female circumcision . . . has been going on with success for some years. It is based on the argument that the practice is a faulty health habit, which is frequently highly charged emotionally. As with most faulty health habits, properly conducted health education and not legislative prohibition, is, par excellence, the most successful approach to the problem."
The purpose of this article is not to go into a description of the different ceremonies of excision as found among the natives in Guinea, but to see how excision affects the sexuality of its female patients and the reason for it from that viewpoint.

At a modern school in Guinea, a survey was conducted in 1964 in which 82 young girls participated. Ten were Christians; 72 Moslem, 84% of the Moslems were excised and three out of the ten Christians. Twelve percent of the Moslems regretted their excision and 35 percent would not put their daughters through the same operation. However, the author states that this will not appreciably diminish the number of excisions, as the practice is solidly grounded in the Guinea culture: 94 percent of the excised had the procedure done between eight and 11 years of age.

Then the author delves into a psychoanalytic reasoning for the operation, based on the premise that the clitoris is the center (positive or negative) of female sexuality. The renouned psychoanalyst, Sigmund Freud, in general, suggested that this is a type of vengeance carried out by older women on young girls because they want to take away some of the pleasures of sex as was done to them and because they can't enjoy sex any more due to their age. The author does not feel that this applies to the Guinea culture because of their views on adultery and sexual morality which are quite liberal.

Another theorist cited by the author, Marie Bonaparte, contends that excision is a physical substitute for moral constraints. It is an adult mechanism used to help the child pass from infancy to adolescence. It satisfies the profound need of the child to be considered an adult.

Another theory states that women have an inherent masochistic tendency which is fulfilled by the accepted pain of excision. In addition, excision plays an important preparatory role for menstruation -- that there is no shame associated with menstruation since it is a prelude to a sexual activity enjoyed by normal adults.

Other reasons for the procedure cited by the author include: to assure fidelity of the spouse by reducing sexual eroticism (the author was not satisfied with this reason); to destroy the clitoris is to take away the bisexual nature of women; and to remove the object of "solitary" sexual enjoyment (masturbation).
In general, the author feels that clitoridectomy in Guinea appears to be practiced as an effort to integrate sexually the woman into society and to prepare her for her sole role - motherhood. However, through his questioning, (which the author considered to be in a very fragmented style), he has come to the conclusion that clitoridectomy does not entirely suppress the sensibility of the clitoris. The goal of excision is not to suppress the center of female eroticism but to create a passage for a form of direct eroticism in the service of procreation.

Describes process of infibulation in the Sudan. It involves cutting away most external female genitalia and almost complete closing of the vaginal opening. The custom is analyzed in context and found to be functionally interrelated with marriage practices, norms of female modesty, women's roles, family honor, and the patrilineage and has a controlling effect on Sudanese fertility and the population growth rate.
The information presented in the article summarizes a review of the medical and anthropological literature in genital mutilation. It includes an extensive geographical survey of female circumcision practiced in African countries.

In the Sudan infibulation continues to be practiced even though it is outlawed. The government is committed to deal with the problem. Infibulation is also reported in Upper Egypt (see Kennedy, 1970) though it is forbidden by law. Excision of different types is almost universal in Ethiopia regardless of religion. In Kenya excision is still practiced though the author says it is generally denied. She bases her knowledge of this country on two surveys (1975 and 1974) of a group of girls' schools in Kikuyu which indicated more than 50% were excised. In Northern Kenya the extreme form, infibulation, is also practiced -- information obtained through correspondence from a Kenyan midwife there. In the Ivory Coast the Chief of Obstetrics and Gynecology of the Triechville Hospital, Abidjan stated that excision is widely practiced there. In Upper Volta the Chief of Maternity at Yalgado Hospital, Ouagadougou said that more than 70% of all female patients coming to the hospital had been excised to some degree. In Senegal the Chief of Obstetrical/Gynecological services of Hospital Dantee/Maternity said that it is practiced in all rural areas. About 1/4 of women who come to the maternity hospital are excised. The entire female population of Somalia is excised according to the Chief of the Banadir Hospital (the only maternal/pediatric hospital in Somalia).

Nigerians also practice this custom according to a response to a questionnaire distributed by the Department of Health of Bendel State in 1976. The Sierra Leone population also practices genital mutilation according to the Muslim Men's and Women's Association there. This also occurs in Mali (no indication of author's source).
The author describes the practice of female circumcision, the medical complications, the countries involved and reasons behind the practice. She says that no medical records on the practice exist, nor have immediate fatalities of the operation ever been registered. Her information comes from published literature, letters and interviews.

Definitions of genital mutilation include: Sunna circumcision (removal of the prepuce of the clitoris); excision (removal of the clitoris together with the adjacent parts of the labia minora); and infibulation (removal of the clitoris, labia minora and part of the labia majora, the two sides of the vulva then being sewn together leaving only a small opening for passage of urine and menstrual blood).

Immediate medical complications are reviewed, (as described by published literature, letters and interviews) including shock, haemorrhage, retention of urine, injury to adjacent structure, infection and failure of the wound to heal. Obstetrical complications include the need for an episiotomy each time the woman gives birth. Labor difficulties may cause tears in the perineum, the muscles and the rectum; some women end up with vaginal vesicle fistulas that are difficult to repair.

In line with this latter complication, the author states that the African Medical and Research Foundation (African Flying Doctor Services, Wilson Airport, P.O. Box 30125, Nairobi, Kenya) proposed (in 1976) that a Vagina Fistula Unit be built because of the extent of the problem in Kenya. The proposal stated that over 300 women were on the waiting list for such operations in Nairobi alone. The proposal estimated that such a unit would perform 500 operations a year. (Whether or not this unit was built is not stated).

Other complications include injured urethra or occlusion of the external urethral meatus by a skin flap, implantation dermoid (tumors of cysts covered by skin); hemorrhagia (excessive menstrual flow due to chronic pelvic infection); dysmenorrhea (painful menstruation); painful coitus; cryptomenorrhea (retention of menstrual blood); and keloid formation.

The author says that excision is widely practiced in East and West Africa including the Kikuyu and Masai tribes in Kenya and Tanzania, Northern Zaire, Ethiopia, Egypt, Benin, Togo and Central African Republic, the Sudan, Nigeria, Uganda, N. Cameroon, N. Ghana, Upper Volta, Mali, Sierra Leone, Mauritania, the Gambia, Senegal and the Ivory Coast.
Reasons given for the practice according to the literature, letters and interviews include:

1) the necessity to have children (i.e. fertility);
2) custom decreed by the ancestors required to become a female, adult member of the tribe;
3) chastity; and
4) a requirement to make a girl truly into a woman.

The author says this operation is now performed in hospitals and the wealthiest people now hire surgeons to perform the operation with a general anesthetic, thus ensuring it is well managed.
Hosken, Fran P. "Female Circumcision in Africa." Victi­

This article examines the practice of female mutila­tion in Africa and its consequences; it outlines the beliefs, myths and values supporting such customs.

The geographical distribution where some type of genital mutilation has been practiced in the past twenty years according to the literature or direct medical testimony received by the author includes:

Arabian Peninsula - South, Hadramout/Yemen; Benin, Gulf of Guinea; Botswana (Bantu, Xhosa, Shangana-Thonga);
Central Africa - forbidden recently; Chad - Shoa Arabs, Shuwa; East Africa - Nilotic and Hamitic tribes, Swahili, Wasembeti, Bantu, and many others; Ethiopia - the entire population except in Gojjam; Egypt - most of the population in rural areas, specifically Nile Valley; The Gambia - all population groups; Ghana - northern areas, Hausa, Mossi, Yoruba; Guinea - 24 ethnic groups (Guineans, Bambaras, Serer, Peuls, and more); Kenya - Masai, Kikuyu, Kisii, Kipsigis, Kamba, Embu, Chuka, Somali, Nandi, and others; Mali - Bambara, Dogons, Mossis, Malinke, Peul, Saracole, Songhoi, and others; Ivory Coast - most population groups; Mauritania - close to 100 percent; Morocco - south, not specified; Niger - over 80 percent of population, all areas; Nigeria - Yoruba, Bendel State, all except Itskris; Cross River State, most; and others; Senegal - Malinke, Toucouleur, Mandingo, Peuls (Fulani), Soce (Casamas), and others; Sierre Leone - all except Creoles; Sudan - most of the population groups except in the south­ern most area; Somalia - the entire female population without exception; Southern Africa - Bantu, Xhosa; Tanzania - Masai, Nilo/Hamitic population, Bantu; Djibouti - most of the population; Togo - not specified; Uganda - Sebei, many others, not specified; Upper Volta - Mossi, 70 percent of all women, some sources say more; Zaire - M'Bwake, northern area.

Infibulation is practiced in Sudan, Eritrea (Ethiopia), Somalia, Northern Kenya, Southern Egypt, Northern Nigeria, and the Red Sea coast. In the rest of the countries, excision (clitoridectomy, sometimes the excision of all external genitalia) is practiced. The severity of the operation depends on the particular village or tribe. The population in more remote areas practice the most damaging operations. There are no doubt more areas in Africa involved, but no documentation
by ethnographic and medical sources is available presently (according to Mrs. Hosken).

Medical complications cited by the author from other literature and the Fifth Congress of the Obstetrical and Gynecological Society of the Sudan in February 1977 include immediate results such as hemorrhages and infections, shock, damage to adjacent structures, rectum and bladder; tetanus, blood poisoning and infections due to septic conditions. Later results are the failure of the wound to heal, difficulty in passing urine and menstrual blood causing infections leading to infertility. Obstetrical problems occur due to scars (for excision and infibulation) which prevent normal dilation. Also in the case of infibulation, extensive cutting of the vulva is necessary to make delivery possible. Other complications include incontinence due to perineal damage sustained in childbirth, dermoid cysts, abscesses and keloid scarring.

The main reason cited by the author for female circumcision, according to a Kenyan midwife, was to decrease the sexual urge so that a woman would neither engage in premarital sex nor desire extramarital sexual relationships; thus, keeping moral behavior in the society. Another reason for the practice, quoted by the author from a letter written by a Nigerian medical practitioner in 1966, is that it is believed to cure infertility.

Reasons for these practices the author discusses (though not stating specific sources) are that a man will not marry a woman unless she is excised. It is also believed to be necessary to ensure family stability and faithfulness of women.

The author also discusses the continuance of the practice in the modern sector. According to A.J. Abdiile, the leader of the Somali delegation at HABITAT, excision and infibulation are now done in hospitals in Somalia. Dr. Pieters, a Belgian surgeon in Mogadishu (1966–68), described the procedure in the general hospital there.
This is a popular article stressing the author's pleas to discontinue U.S. aid to Somalia until these female mutilations are discontinued. However, interesting facts on female circumcision were presented.

Dr. R. Cook, a regional WHO adviser, determined that the "present prevalence in Somalia of the practice known as infibulation is not much less than universal." Infibulation is practiced mainly in Moslem areas of Somalia, Kenya, Ethiopia and the Sudan. Excision or clitoridectomy is practiced in such areas as Egypt, Kenya, Tanzania, Senegal and Nigeria.

In Somalia, infibulation most often takes place in the home, with children between the ages of 4 and 8 treated by neighborhood women. One Somalian woman stated, "In Somalia, for a girl to be able to get married—and that is her only purpose in life—she must be closed." Women believe the operation is essential. Also, women all over Africa with whom Mrs. Hosken spoke are convinced that these mutilations are essential and are practiced everywhere in the world. Most African women in the West deny knowing anything about the operations, which are surrounded by superstition, shame, and myths.

In 1977, physicians at the 5th Sudanese Obstetrical/Gynecological Congress in Khartoum condemned these operations and voted a unanimous recommendation that "circumcision in any form should be abolished." Edna Adan Ismail, who is in charge of midwife training in Somalia explained that "part of midwife training is to learn to cut open the women so they can give birth—usually two cuts are needed."

Dr. Guy Pieters wrote in 1972 that, "in the General Hospital of Mogadishu, about 15 infibulation operations are done every Sunday." These operations are performed by specially trained Somali male nurses.

It is recommended by the author that WHO conduct an Africa-wide study and then recommend preventive and educational actions that could be financially supported internationally.

General background information on female genital mutilation including health facts, history and epidemiology of circumcision, prevalence and data collection problems is discussed. Suggestions for research and preventive methods are given.

The author proposes to develop health education material packages for use on the local level by women's organizations teaching reproduction and biological facts. Non-technical information packets should be distributed to these groups as well as rural midwives asking them to help develop an education program.

Mrs. Hosken condenses her information on female circumcision, received either through letters from people in the countries concerned, or gathered on her own trips.

The book is divided into three parts. Part I contains the medical facts concerning the practice, the recommendations made at the WHO Seminar in Khartoum, 1979 "Women and Development in Africa"—and, a history of genital/sexual mutilations with a geographic overview. Part II outlines case histories with the countries cited divided into five geographic regions—East Africa, West Africa, the Arab Peninsula, Asia (Indonesia/Malaysia) and the Western World. Part III cites the primary reasons given for the practice, a comparison with male circumcision, some of the politics involved behind genital mutilation and a general outlook on women and health.
Health conditions of women related to reproduction are surveyed based on the author's research trip to seven countries in East and West Africa, February/March 1977. The objective was to identify preventive care options and activities in which women on all levels can participate as agents, educators and deliverers of services as well as consumers. Participatory self-help by and for women will improve health and reduce need for acute care services. Preventive care is defined as the prevention of unwanted pregnancies (childspacing) and the prevention of damaging reproduction-related practices such as circumcision.

According to the author, if more healthy children reach maturity and the understanding of reproductive functions is improved by a women to women system, family planning will be increasingly accepted by women and communicated, provided other health needs are met. The opportunities for developing such a preventive care system, in Africa especially, are available due to the traditional birth attendant system. The survey, based on interviews and meetings with health personnel in East and West Africa, identifies specific opportunities and models in the countries visited.

Support from the public health system as well as international agencies for such women to women activities should be considered as top priority, according to the author.
Female circumcision is an ancient custom, known all over the world, but most commonly found in North and East of Africa and some parts of Arabia. The medical and hygienic reasons cited for male circumcision cannot be put forward in favor of severe mutilations of a woman, according to the author. Some nations have tried by legal measures to abolish the practice. It seems that the incidence of infibulation is declining now in Egypt, but in the Sudan, though illegal for about 20 years, it is still performed widely. The British Colonial Administration in Kenya was also not very successful in banning the custom. Progress appears in larger towns of Ethiopia already, though female circumcision is by no means illegal in that country. Author states that each physician, working in developing countries, should be familiar with problems of female circumcision.

This article dealing with circumcision and infibulation in Ethiopia is in German and has not been translated. No English summary at the end was included. According to Mrs. Hosken's bibliographical annotation, it describes specific operations by specific tribes in Ethiopia.
Dr. Imperato's book on his experiences as a physician in a medical mission in the Tanzanian bush includes a chapter on the female circumcision rites practiced by the tribes of Banta, Nilo-Hamitic, Nilotic and Hamitic background.

According to the author, in the region where he practiced an uncircumcised individual was looked upon as an outcast and a foreigner to the tribe. It was believed that such people were not capable of producing offspring and it was taboo for anyone to marry an uncircumcised tribesman (male or female). Public opinion (in 1964) still forced Christian children within the tribe to undergo the operation.

The average age for circumcision for both males and females ranges from 10-15 years. Among the tribes in the region described, the operation on the girls is a clitoridectomy. The reason for the operation, according to natives the author spoke with, was that it deprived a woman of sexual gratification thus insuring she would remain faithful to her husband.

The female circumciser is an old woman of the village who is paid for her work. The role of the other female elders is to watch the girls facial expressions and actions as they undergo the operation since great honor is accorded a child who demonstrates no signs of suffering.

The author witnessed the female circumcisions of the Wasembetic tribe.

The author discusses the practice of both male and female circumcision and excision ceremonies among Nubians (residing between Aswan, Egypt and Dungola, Sudan). A discussion and analysis ensues on the purpose of the practices based on current anthropological theories of initiation. The data presented were in the main gathered during a field study in Kanuba, a village of Nubians, in 1963-4 and three trips to Nubia of several weeks each between 1962 and 1964.

The Nubian excision operation removes a girl's clitoris and closes her vulva with scar tissue and is much more extreme and radical than circumcision. It is referred to as the "pharaonic" or "Sudanese" style, and is actually an infibulation. Though her operation is more severe, the girl's ceremony is comparatively abbreviated and private. A brief description ensues of the night before the operation and the ceremonies held on the day of the operation.

The Nubians consider the genital operation necessary for all normal children and give several reasons for it. Almost invariably, the immediate explanation offered is that circumcision is a religious obligation prescribed by the Prophet Mohammed—it purifies the child both spiritually and physically. It is said to promote fertility, and to maintain general body health; prepares the person to enter marriage; prevents the loss of virginity; stifles the woman's inherently wanton character which is physiologically centered in the clitoris. However, there is no medical evidence that any diminishing effect on desire is actually produced. A final Nubian rationale is an aesthetic one—without the operation, the sex organs are disgusting to the marriage partner both visually and to the touch.

The Nubian circumcision and excision ceremonies represented preliminary stages to the marriage complex. Both were community events with social functions relating to community solidarity and identity. The author feels that genital operations cannot be treated as separate ritual entities.

A vivid fear of the evils of unchaste behavior, the great responsibility of child rearing, and an intense awareness of his or her genitals were all powerfully impressed upon the consciousness of the circumcised or excised child. The evidence suggests that a principle effect was to create in the child an intense awareness of his sexuality and anxiety concerning its social significance.
Throughout the years, girls' excision ceremonies have continued much in the same form with a trend towards a lessening of the severity of the operation. There is an increasing tendency to substitute the "Egyptian method," a simple excision of the clitoris, for the infibulation.

As can be seen, the author stressed the psychological effects and cultural reasons for the practices of circumcision and excision. His concluding statement was that "attempts to formulate a theory which can account for all customs of genital operations seem doomed to failure. . . It is now appropriate to abandon the search for a simple one-factor theory, and to seek multiple explanations which deal with larger complexes of determinants."
Kenyatta includes, in his chapter on initiation rites, a discussion of the meaning and importance of female circumcision to the initiation of a woman as a member of the Kikuyu tribe in Kenya.

He says (in 1953) that even educated Kikuyu defend this custom. "No proper Kikuyu (sic) would dream of marryng a girl who has not been circumcised . . ."
"It is taboo to have sexual relations with someone who has not undergone this operation."

The author believes that this operation is regarded as "the very essence of an institution which has enormous educational, social, moral and religious implications. . . It is impossible for a member of the tribe to imagine an initiation without clitoridectomy." This initiation is looked upon, according to Kenyatta, as a deciding factor in giving a girl the status of womanhood in the community. The operation marks the commencement of participation as an adult in the tribe. Also, the "irua" or age-groups begin from the day of the physical operation. Age-groups are the mainstay of the social order in the tribe; each has a leader who will retain this position for life. This group is a community responsible for itself within the larger tribe.

The author defends the practice saying that the old women who operate are skilled from experience and that only the tip of the clitoris is cut. No infibulation occurs, nor is any of the labia minora or majora excised. He also says the wound is attended with "antiseptic and healing leaves" and that the girl hardly feels any pain during the actual operation because "water is thrown on the girls sexual organ to make it numb."

The author also discusses the attacks on the custom by European missionaries, government and medical authorities. He says that the Gikuyu (sic) perceive these attacks as a "secret aim to disintegrate their social order and thereby hasten their Europeanization."
The term gynatresia means narrowing of the female genital tract. The stenosis may be confined to the vulval orifice or involve part or all of the vagina.

In West Africa where excision includes the tip of the clitoris and part of the labia minora (though union of the raw labia surfaces across the midline is not encouraged), the vulval orifice may be so narrowed by unyielding scar tissue that obstruction to delivery occurs unless a deep episiotomy is performed.

In the Nile Valley and East Africa, the operation is more extensive, consisting of the complete excision of the labia minora and clitoris. Union of the denuded edges (infibulation) is encouraged. The result is that the urethra and vestibule become hidden by a bridge of skin and scar tissue. If the aperture between the labia is very small, urine can accumulate in the vagina and dribble continuously, and occasionally a calculus forms in the vagina or covered over vestibule.

If the introitus is very small, areainia may result. Division of part of the skin bridge is then necessary to permit intercourse. During delivery a further enlargement known as anterior episiotomy has to be made. Since the patient usually demands that this be repaired, this same procedure is also necessary at subsequent deliveries.

Stenosis of the vagina may be complete, due to circumcision with obliteration of the lumen, or incomplete when a narrow canal exists. The whole length of the vagina may be involved or the stenosis may be confined to a segment.

Female circumcision may also cause an obstructed labor which in turn causes stenoses. The fetus may be arrested in the vagina for so long that pressure necrosis of the vaginal wall occurs. Some days after delivery the affected part of the wall sloughs; if the underlying wall of the bladder or rectum is also involved, fistulae into the vagina result.
After the sloughs have separated, the unlined vaginal cavity heals by granulation and the fibrosis which follows produces scarring which contracts and causes stenosis.
The immediate and late complications of female circumcision and in particular of infibulation are described, the practice being a custom in various underdeveloped countries. Four cases of infertility due to chronic inflammation of the tubes secondary to an ascendant infection contracted at the time of this rough procedure during infancy are reported. Critical discussion of the aims and of the obscure significance of this barbarous practice leads the author to postulate its abolition by means of a campaign of intensive health education to be carried out by the more highly developed nations.

The author first lists the areas of the world where female circumcision is practiced including:

- Africa (Upper Egypt, Sudan, Abyssinia, Somalia, Kenya, Ghana, Congo, Nigeria)
- America (Peru, Ecuador, some tribes in Brazil and Mexico)
- Asia (Malaysia)
- Australia and Polynesia
- Europe (Russian religious Skoptsisut).

The author does not say where this information was gained, though general bibliographical references are listed at the end of the article.

He also includes a chart of the age at which females are circumcised:

- Guinea, Abyssinia: First day of life
- Somalia: 3-4 yrs.
- Sudan: 6-7 yrs.
- Egypt: 9-10 yrs.
- Peru: 10 yrs.
- Australia and Bantu Tribes: 14-15 yrs.
- Masais: after marriage

Again, the source of his information is not specifically stated.

Medical complications due to the practice are listed below as immediate and late.
Immediate

Hemorrhage, shock, damage to neighboring organs (urethra, bladder, rectum, Bartholin's gland);
Infection either localized ascending (urethritis, cystitis, metritis, salpingitis, pelviperitonitis)
or generalized (tetanus, septicemia);
Retention of urine;
Acute anemia

Late

Menorrhagia, dysmenorrhea, algomenorrhea, cryptomenorrhea including hematometra and hematocolpos;
Keloid scars;
Dermoids of external genitalia;
Vaginal calculi;
Infertility;
Psychological, marital and obstetric complications, the latter consisting of perineal laceration, hemorrhage, infection, formation of fistulas after delivery.

In the context of the problem of infertility due to infibulation. (the author says that 20-25% of cases of infertility in the Sudan may be due to female circumcision, though he says there are no precise statistics) the problem is not so much due to the impossibility of sexual intercourse as owing to chronic salpingo-pelvic inflammation brought about by the operation.

Four cases are described of women hospitalized for pelvic pain, menstrual irregularities and infertility. The women were ages 20, 21, 24 and 25. They had all been submitted at the age of 7 or 8 to excision of external genital organs. From puberty, they complained of pain in the lower abdomen and menses were irregular.

Upon marriage, they had all submitted to defibulation and despite normal intercourse all had presented a state of infertility for 5 years duration. Two of the women had previously undergone left salpingo-ovariectomies.

Salpingographic findings showed that in two of the four women the right tube was not visualized and the left was obstructed at its ampullar end. In the two salpingectomised women the residual salpin was not seen.

The first two patients had bilateral salpingosotomies after lysis of the extensive salpingo-pelvic adhesions. Tubal
insufflation after surgery showed the salpinges to be permeable. Nevertheless, a year after surgery, neither of the two patients had conceived.

The author says there is a direct cause-effect relationship between the rough procedure performed on the external genitalia and the chronic state of phlogosis of the salpinges and pelvic organs in general.

After discussing the cases the author then lists possible reasons for the custom:

a) Decrease sexual tension;

b) Safeguard virginity (Sudan);

c) Hygiene (Bantu);

d) Prevention or reduction of labial hypertrophy (Hottentots and Amharas);

e) Mystical and religious motives (Masais and Swahilis);

f) Religious influences (Moslems);

g) Increase fertility (Mandingos).

The author does not explain how the list was compiled nor the data or bibliographic references used.

This article deals with a study of beliefs and practices of the Yoruba tribe of West Africa, which relate to fertility, pregnancy, labor, delivery, and infant care in order to assess their effect on maternal and child health. The information contained in this report was acquired during 32 months of clinical practice in the village of Ile-Ife, a community of approximately 100,000 people, which is considered to be the spiritual center for the Yoruba.

A very brief paragraph in the article is dedicated to circumcision. Traditionally, on the sixth day of life, the baby-male or female—is named and circumcised. Circumcision is performed by the local doctor shortly after sunrise. Scissors or two small pieces of bamboo used in a scissor-like action remove the anterior portion of the labia minora and the clitoris in a piece the size of a "date stone." In some instances the entire labia minora and majora are excised. No anesthesia is used. It is mentioned that occasionally the operation is complicated by hemorrhage or the development of infection or tetanus.

The only reason mentioned for the practice is that it is believed to give a "finishing touch to the work of the supreme creator."

No mention was made of the author's dealings with problems of circumcision, although he did place this practice in the category of those customs which are probably not in the best interest of either the mother or the newborn infant.
The author found that the conduct of research in the area of attitudes towards circumcision in women in the Sudan was difficult. Some of the obstacles encountered were due to the fact that: 1) the whole subject is almost taboo and there is reluctance to discuss it; and 2) attitudes toward circumcision often depended on whether or not the female herself had undergone the operation. No thorough psychological research has yet been carried out to ascertain what effect infibulation and less severe forms of genital excision have on sexual and other attitudes and behavior.

In order to evaluate the study in full, it was decided to include the article with an explanation of the method used, the questionnaire, results, conclusions, and discussion as it appeared in the article.

Method

The method employed in the study which follows was used both because of the number of subjects studied and because the whole subject of infibulation is almost sacrosanct. It was therefore felt best to assess the problem as openly as possible and take a most objective stance towards the whole situation.

1. Subjects

The subjects studied were all University Students in their first and second year of teacher training. They were studying for the Higher Secondary School Degree or for the Lower Secondary School teaching qualification. (Higher Secondary Schools category include pupils ages 16-19. Lower Secondary Schools include students ages 14-16). In addition a small sample of 9 middle-aged married men from a middle class background were interviewed. In the major group the subjects were between the ages of 19 and 26 and came from various parts of the Sudan. Most came from the main cities of Khartoum, or Omdurman, or to the north of these cities. The rest came from the South. Fifteen percent were Christian, the remainder were Moslem. Their background was predominantly middle class (96%) or their fathers owned small shops and were traders. Some had, despite limited home backgrounds, because of superior ability, achieved University status through a system of highly demanding state school examinations. Of the 96% from the predominantly privileged group, 69% also received a state education. Twenty-seven percent were educated in independent or private schools. The total sample consisted of 185 individuals, 153 men and 32
women. All of the women had undergone infibulation experiences. All of the men were single while four of the women were married.

2. Procedure

The following questionnaire was constructed and consisted of the following questions and the answers were later analyzed.

(a) **The questionnaire.**

(1) Are you for or against

| (a) infibulation | Yes/No |
| (b) clitoridectomy; | Yes/No |
| (c) any kind of genital ablation whatsoever. | Yes/No |

(2) Would you allow your daughter to have any kind of genital ablation? Yes/No

(3) Why are you essentially for this practice:

| (a) It is the custom. |
| (b) It ensures chastity. |
| (c) It is cleaner. |
| (d) It is healthier for the woman. |
| (e) It is part of our religion. |
| (f) A woman cannot get a husband without it. |
| (g) It controls births. |

(4) Why are you essentially against this practice:

| (a) It is unnecessary. |
| (b) It is cruel and barbarous. |
| (c) It is dangerous and could lead to infection, illness and death. |
| (d) It spoils a man's pleasure sexually. |
| (e) It spoils a woman's pleasure sexually. |
| (f) It is against the law and the religion. |
| (g) It is based on an old custom and fashion. |

(5) What steps would you like to see taken to control or prevent this practice?

| (a) Enforce the law against it, i.e. the Government do something. |
| (b) Education of adults and especially the old people. |
| (c) To get doctors to speak out against it more. |
| (d) Religious leaders of Islam should speak more forcefully against this practice. |
| (e) Research articles and books should be written to condemn the practice. |
(f) Young girls must be told early not to allow it.
(g) Husbands should demand that they prefer their wives without this operation.

To ascertain the alternatives for questions 1-5 a discussion had initially taken place in which the points mentioned were raised by the students themselves.

(b) **Method of administration.**

The method of administration had to be carried out with the greatest circumspection mainly because the topic was so charged with emotion and controversy. It was, therefore, carried out at the University in Omdurman, with the questionnaire being read to the students while they attend class and responded verbally to it.

The topic had been discussed on a number of occasions and at such times the students were asked whether they would be willing to co-operate by giving their true and honest opinion on the subject of female circumcision. There had been a 100% affirmative response to this. The psychologist was careful not to make his own views on the subject known. The survey of views was carried out only after the psychologist had learned to know the students and could ask for a show of hands on such a sensitive subject as the questionnaire dealt with.

A hand count was taken and checked by one of the students for accuracy. This rather open way was seen to be more preferable to a more confidential procedure for the following reasons:

(i) It was quicker to count individuals' responses.
(ii) It was felt that it ensured a full response by the subjects to the questions. Many might not have otherwise returned the form after giving a great deal of thought to it.
(iii) It gave the students (many of whom did not speak good English) the opportunity to ask questions concerning the contents of the questionnaire, and how best to interpret the questions.

The older middle aged men were interviewed separately, using the same questionnaire but additional questions were asked in order to ascertain a great deal of information relating to their attitude to the circumcision of women generally.
Results

The result of the survey was divided into male and female responses and since the sample of females was so small (32), no sophisticated statistical analyses were undertaken. The age difference between the students was small and hence no analysis was made on the basis of age. They were a relatively homogeneous group, mostly with a middle class background and all intending to become teachers. It must be remembered that, with the exception of the small non-Moslem sample, they had been brought up and had lived for many years in the culture of the Sudan. The tables which follow use A for agree, D for disagree and U for uncertain.

Question 2 of the questionnaire: "Would you allow your daughter to have any kind of genital ablation."

Table 1: For and Against the Circumcision of Women

<table>
<thead>
<tr>
<th>Type of circumcision</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>Infibulation</td>
<td>3</td>
<td>84</td>
</tr>
<tr>
<td>Clitoridectomy</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>Minor excision</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Totals</td>
<td>8</td>
<td>132</td>
</tr>
</tbody>
</table>

All the older men in the sample were for infibulation of women.

Table 2: Reason for Circumcision of Women

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Men</th>
<th>Women</th>
<th>Older Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is the custom</td>
<td>8</td>
<td>29</td>
<td>9</td>
</tr>
<tr>
<td>Ensures chastity</td>
<td>6</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>It is cleaner</td>
<td>6</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>It is healthier for women</td>
<td>4</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>It is part of our religion</td>
<td>2</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>A woman cannot get a husband</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>without it</td>
<td>8</td>
<td>29</td>
<td>9</td>
</tr>
<tr>
<td>It controls births</td>
<td>1</td>
<td>16</td>
<td>2</td>
</tr>
</tbody>
</table>
Here the respondents who were for some kind of circumcision operation are asked to give all their reasons for favouring the practice.

Table 3: Reasons for Being Against Practice of Circumcision

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unnecessary</td>
<td>132</td>
<td>1</td>
</tr>
<tr>
<td>Cruel and barbarous</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>Dangerous</td>
<td>74</td>
<td>1</td>
</tr>
<tr>
<td>Spoils man's pleasure</td>
<td>111</td>
<td>--</td>
</tr>
<tr>
<td>Spoils woman's pleasure</td>
<td>119</td>
<td>1</td>
</tr>
<tr>
<td>Against our religion and law</td>
<td>9</td>
<td>--</td>
</tr>
<tr>
<td>Based on old customs and fashions</td>
<td>132</td>
<td>1</td>
</tr>
</tbody>
</table>

Those against the practice were also asked to give as many reasons as they wished for being against it.

Yes/No. This corresponded generally with the reply to question 1 and hence was not analyzed separately.

Conclusions

(1) Most of the young men were essentially against the practice of infibulation, clitoridectomy, or any other excision of female sexual organs.

(2) Most of the women were for the practice of infibulation, clitoridectomy, etc. but the female sample was extremely small and it must be remembered that they had all received the operation.

(3) The main reasons given for those who favored some form of circumcision were:

   (a) circumcision is the custom;
   (b) a woman cannot find a husband without it;
   (c) circumcision is supposedly a part of the religion;
   (d) circumcision is cleaner.

(4) The main reasons given for those who were against the practice of circumcision of women were:

   (a) it was unnecessary;
   (b) it was based on old customs and fashions;
   (c) it spoiled the woman's pleasure;
   (d) it spoiled the man's pleasure;
(e) it was cruel and barbarous;
(f) it was dangerous.

(5) The main manner suggested for controlling the practice of circumcision were:

(a) Enforce the law against it, by the Government taking appropriate action;
(b) Education of adults especially older people;
(c) Husbands should demand that they prefer their wives without the operation;
(d) Religious leaders of Islam should more frequently speak out against this practice;
(e) Young girls must be told early not to allow it to be done to them;
(f) Doctors should more frequently speak out against this practice;
(g) Research articles and books should be written to condemn these practices;

Table 4: How Practice Should be Controlled

<table>
<thead>
<tr>
<th>Method</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enforce law against it, i.e.:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government do something</td>
<td>132</td>
<td>1</td>
</tr>
<tr>
<td>Education of adults, especially older people</td>
<td>127</td>
<td>1</td>
</tr>
<tr>
<td>Get doctors to speak against it more</td>
<td>74</td>
<td>1</td>
</tr>
<tr>
<td>Religious leaders of Islam should speak out against it more</td>
<td>102</td>
<td>1</td>
</tr>
<tr>
<td>Research articles or books should be written to condemn the practice</td>
<td>39</td>
<td>1</td>
</tr>
<tr>
<td>Young girls must be told early not to allow it</td>
<td>97</td>
<td>1</td>
</tr>
<tr>
<td>Husbands should demand that they prefer their wives without it</td>
<td>110</td>
<td>1</td>
</tr>
</tbody>
</table>

(6) The small sample of older men were unanimously agreed in feeling that infibulation was necessary and desirable from everyone's point of view. It would certainly be useful to assess a larger sample of such men from a representative cross section of the total population.
A similar investigation at some future time could be used to assess changes in attitudes based on a wider and more representative cross section of Sudanese society. This is likely to be more feasible in the future when the subject is more open to discussion.

**Discussion**

Hayes, according to Lowenstein, oversimplifies the problem of infibulation and its solution. She claims "... that patrilineage is the institution which has the most direct and most powerful latent function with respect to infibulation." This can be part of the problem as the research just presented signified.

Present research suggests that there is considerable pressure on the female, especially from the older more influential women to carry out the practice of infibulation and so perpetuate it. It would appear that women in Sudanese culture and elsewhere have been caught up in the vogue and momentum of the traditional practices of circumcision. There is therefore a strong pressure to conform and great difficulty is experienced in the attempts to break old established customs in this area. Not only is there much propaganda for the practice continuing, especially amongst females, but there is little or no counter propaganda which might help reverse such thinking and eventually eradicate it. Hayes suggests that with the rising dependence on wage labor "girls are increasingly subjected to the less severe operation of excision of the clitoris instead of infibulation."

The view that clitoridectomy is preferred by younger men rather than infibulation was certainly not borne out by the present research with this ample almost ten years later. Social pressure and conformity to marital traditions still enjoy the largest body of support for the continuation of both infibulation and clitoridectomy.

A comparison of Hayes' sample with the present one is always fraught with dangers since there are innumerable variables with which to contend in addition to the passage of time which undoubtedly plays a part in a rapidly developing country.

Hayes had interviews with 86 (58 females and 28 males) informants. Twenty-nine were urban and rural husbands and wives, 8 were female nurses in urban and rural areas, while
16 were female teachers and students at urban and rural secondary schools for girls. Thirty-three were male and female students of the faculty at the University of Khartoum where they studied.

Forty-five of her informants had completed secondary school. Only 40% of these (the relatively high educated elite) expressed the view that they would limit the excision to clitoridectomies. Of the remaining samples 60% retained the wish for complete infibulation. No data were available as to differences of views by sex, by age or social position.

My own study, according to Lowenstein, with a larger but less representative sample, clearly shows that among the most educated members of male Sudanese society and more particularly the young educated male, there is a strong attitude against the practice of infibulation, clitoridectomy or any other excision of female external genitalia. The reasons given are again a reflection of educational status and personal experiences probably from outside their own cultural base.

The most common response among the young males was that the whole process of infibulation and clitoridectomy was harmful from the point of view of good sexual relations with the female. The fact that such operations stood in the way of mutually satisfying relationships with each enjoying the pleasure of the other partner as well as one's own, shows how far the effect of liberal thinking has travelled. The predominant reasons for eliminating such operations were still male preferences based on their own sexual satisfactions as husbands. These they felt were being destroyed by such operations, as well as the sexual needs of the woman being undermined. The situation may be summarized as follows:

1. The male would be denied access to the female in the frequency which his own sexual drive demanded because:

   (a) it was essentially painful to the women;
   (b) she co-habited out of a sense of duty only.

2. The male would be denied the gratification of knowing that he could give the female pleasure and bring her to orgasm if possible.

Since changes in cultural practices so frequently are brought about by the influences of the better educated members of that society, one can only hope that in time perhaps enlightened and humane views on the practice of genital excision may penetrate to all levels of the Sudanese culture. Practices for which any feeling member of any society must sense revulsion will thereby be eradicated.
There remains the question of population control. It is difficult to estimate to what degree infibulation has actually controlled the population growth of the Sudan and although no objective evidence is available, the following comments as to a comparison based on non-infibulation, we can merely state the following:

(1) The population growth in the Sudan is still in excess of what it might be.

(2) The other methods of population control undoubtedly will be more successful, i.e. vasectomies, oral contraceptives, voluntary sterilization, or some other method.

(3) There is some evidence to suggest that the pain associated with sexual intercourse after infibulation, or the lack of pleasure derived from the act of sexual relations, may actually contribute to an increase in the birth rate. The reason for this is that, during pregnancy and for a period after birth the female is able to avoid having sexual contact with the male and indeed is given a great deal of attention and care. Pregnancy thus safeguards having sexual contact with the male while at the same time ensures a certain amount of reinforcement. Not having any sexual relations with the male may well be preferred to regular sexual intercourse. This could actually encourage a rise in the birth rate.

It would appear that teachers and medical staff and others might become the proselytizers of a 'new' form of birth control in the Sudan. This is already being carried out by the Family Planning Association. It will be a difficult, often unrewarding and sometimes dangerous task for those in the forefront of trying to change a pattern of demeanor. The practice of infibulation and other similar operations are dangerous, cruel and destructive, and eventually spoil one of man's and woman's most joyful pursuits: giving one another physical and emotional pleasure through the act of sexual love.

The average age for carcinoma of the vulva in Sudan is 51.6 years (range was 35-70 yrs). This means the age is ten years less than that for carcinoma of the vulva in western countries (61-64 years).

Possible actiological factors in carcinoma of the vulva include urinary wetting of the perineum which may be caused by circumcision. Some examples of the geographical distribution of carcinoma in the female genital tract are cited below.

Site Distribution of Cancers of the Female Genital Tract in Certain African Countries*

<table>
<thead>
<tr>
<th>Site</th>
<th>Nigeria No. %</th>
<th>Uganda No. %</th>
<th>S. Africa No. %</th>
<th>Congo No. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulva</td>
<td>7 1.9</td>
<td>4 1.2</td>
<td>25 2.87</td>
<td>27 2.9</td>
</tr>
<tr>
<td>Vagina</td>
<td>5 1.4</td>
<td>4 1.2</td>
<td>--</td>
<td>6 0.66</td>
</tr>
<tr>
<td>Corpus</td>
<td>59 16.4</td>
<td>12 3.8</td>
<td>9 1.03</td>
<td>11 1.2</td>
</tr>
<tr>
<td>Cervix</td>
<td>58 18.6</td>
<td>379 43.0</td>
<td>162 17.9</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site</th>
<th>Portugal E. Africa No. %</th>
<th>South Africa Rural No. %</th>
<th>Urban No. %</th>
<th>Sudan No. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulva</td>
<td>--</td>
<td>0 0.0</td>
<td>3 1.2</td>
<td>20 1.9</td>
</tr>
<tr>
<td>Vagina</td>
<td>24 5.5</td>
<td>0 0.0</td>
<td>2 0.8</td>
<td>5 0.5</td>
</tr>
<tr>
<td>Corpus</td>
<td>4 0.9</td>
<td>1 0.21</td>
<td>1 0.4</td>
<td>42 3.9</td>
</tr>
<tr>
<td>Cervix</td>
<td>89 20.6</td>
<td>198 41.6</td>
<td>68 27.2</td>
<td>169 15.7</td>
</tr>
</tbody>
</table>

* Data for countries other than Sudan obtained from:


The object of this paper was to inquire into the effects of the social and cultural changes on the type of operation and its complications. It is based on notes and observations on female circumcision. So that the picture would be as complete as possible, the author has drawn on the experience of other doctors, midwives, nurses, health visitors and social workers.

Several tables were included on the type of operations done in Africa and specifically in the Sudan. (See the following table).

Types of Operation by Nationality

Key
0 = Uncircumcised
1 = Sunna
2 = Pharoanic
3 = Modified Sunna-Pharoanic
4 = Recircumcision or Reinfibulation

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Type 0</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Sudan</td>
<td>7</td>
<td>12</td>
<td>1448</td>
<td>1043</td>
<td>16</td>
<td>2526</td>
</tr>
<tr>
<td>Southern Sudan</td>
<td>117</td>
<td>--</td>
<td>5</td>
<td>18</td>
<td>--</td>
<td>124</td>
</tr>
<tr>
<td>Egypt</td>
<td>64</td>
<td>58</td>
<td>5</td>
<td>18</td>
<td>--</td>
<td>145</td>
</tr>
<tr>
<td>Other Arab</td>
<td>11</td>
<td>--</td>
<td>2</td>
<td>8</td>
<td>--</td>
<td>21</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>76</td>
<td>--</td>
<td>2</td>
<td>11</td>
<td>--</td>
<td>89</td>
</tr>
<tr>
<td>Eritrea and Somali</td>
<td>--</td>
<td>--</td>
<td>9</td>
<td>--</td>
<td>--</td>
<td>9</td>
</tr>
<tr>
<td>East. Africa</td>
<td>38</td>
<td>--</td>
<td>3</td>
<td>4</td>
<td>--</td>
<td>45</td>
</tr>
<tr>
<td>Others</td>
<td>40</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>40</td>
</tr>
</tbody>
</table>
The table below shows the distribution of the types in Northern Sudan in years 1960-1965 and 1970. The author says only seven girls were uncircumcised (underage and 12 had the legal Sunna). He believes this low figure is misleading because the total number of girls he says were seen in this series were 61. No information was given but the author believes that a large number of girls below the marriage age are not circumcised or had the Sunna circumcision only. He says he knows of many families who abolished the custom.

Complications due to circumcision were also given and a table indicating the number of cases seen (over what period of time and where seen was not indicated though it was stated that 3000 cases were analyzed for the article).

<table>
<thead>
<tr>
<th>Type of Circumcision</th>
<th>1960</th>
<th>1965</th>
<th>1970</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underage (Uncircumcised)</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Sunna</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Pharoanic</td>
<td>738</td>
<td>428</td>
<td>282</td>
<td>1448</td>
</tr>
<tr>
<td>Modified Sunna</td>
<td>124</td>
<td>514</td>
<td>405</td>
<td>1043</td>
</tr>
<tr>
<td>Recircumcised</td>
<td>3</td>
<td>8</td>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>
The table below represents the results from a case study. However, a description of the methodology was not included and there was no discussion of the number of participants involved.

### Complications of Circumcision

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1965</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Hemorrhage</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Injury to Tissue</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Acute Infection</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Retention of Urine</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vulval Abscess</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Tight Circumcision</td>
<td>14</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>False Vagina</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Uretheral coitus</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coital injuries</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Infected Episiotomy</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Recircumcision</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36</strong></td>
<td><strong>18</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

The author is a research assistant in the Department of Obstetrics and Gynecology at the University of Khartoum in Sudan.

Infibulation is practiced by many tribes in the Sudan including:

Red Sea tribes in East Sudan (the Befa, Amarai, Beni Amir, Bushariya, Hendendawa); Southern Sudan (Rashyda, Fallata, Senga and Sinnar); Western Sudan (Baggara, Kabbabish and Humor); Northern Sudan (Barabra and Danagla). The author does not mention the prevalence of the practice or where his evidence about its use among these tribes comes from.

Complications resulting from the operation are described. This description is derived from other literature and the writer's own observations.

**Immediate Complications:**

- Shock
- Haemorrhage
- Injury to adjacent structures
- Infection
- Retention of urine
- Anemia

**Later Gynecological Complications**

Infertility (Author says 20-25 percent of cases of infertility in the Sudan are due to infibulation which may cause chronic pelvic infection or prevent sexual intercourse. How this figure is obtained is not stated).

- Implantation dermoids
- Menorrhagia
- Dysmenorrhoea
- Cryptomenorrhoea
- Keloid scar formation
- Vaginal calculus
Marital and Psychological Complications:

Coital difficulties (The author says about 6-10 perineal and vaginal tears are treated annually in Khartoum hospital.)

Obstetric Complications:

Mothers need expert assistance in delivery. Perinatal tears, fistula, haemorrhage and infection are common. The author says an episiotomy is necessary in almost all patients. Circumcision is associated with damage to the urethra, vagina, or fetal scalp. Stenosis of the cervix, vagina or perineum may also occur. Prolonged labor may also cause fistula formation.

Other Complications:

Vaginal examination is difficult, as is catheterization since the meatus is hidden.

No data on number of cases seen due to the medical complications listed was given.
Female circumcision has been going on for centuries and although attitudes to sex have changed a little, it is still practiced to this day in several African countries because of "customs and tradition." The author relates the various reasons for female circumcision as well as citing specific examples of the process as told by women who had undergone the mutilations. The actual procedures are explained, including the numerous medical complications which develop afterwards. It is the author's opinion that "the dangers of circumcision on girls have to be exposed; that every family should be made aware of these dangers to the health and lives of their daughters. Nothing short of the world-wide campaign and education of the type mounted by the International Planned Parenthood Federation as regards family planning, is needed to eradicate genital mutilation on girls."

Ms. Ogunmodede, a Nigerian journalist, is actually making a plea to discontinue the practice of female circumcision. She has found that in addition to having its origins in a constellation of beliefs, traditional customs and social values, its primary objective is to keep the young girl "pure" and the married woman faithful.

The dangers of circumcision are: shock, hemorrhage with often fatal results, infections complicated by tetanus, urinary retention, damage of urethra or anus, gynecological complications resulting from ill-performed cuts, chronic pelvic infection, calculus formation, infertility caused by damage to vital organs and infections, obstetric complications resulting in delayed labor or inability to deliver a baby normally.

Ms. Ogunmodede gives two brief accounts of the experience of the operation and how the memory of its has remained with the person.

It is stated that the medical problems were considered so serious that in 1958 the U.N. Commission on the Status of Women called upon WHO to undertake a study of "persistence of customs which subject girls to ritual operations and of the measures planned to put an end to it."

Also, in 1960, at the U.N. seminar in Addis Ababa, WHO was called upon by African delegates to undertake a study of the medical aspects of genital operations on girls.

However, it is not known if anything has come of this, as the practice still continues. It is also unknown how the author received her information for her article.
Acquired vulval atresia is the fusion of the labia majora and the labia minora in the process of healing after circumcision (of clitoris). The author describes a case where this occurred in an eight month old Nigerian baby girl. The baby was circumcised by a traditional "surgeon" on the eighth day after birth as is the custom (the author says). The other two daughters in the family had also been circumcised (only the clitoris, not radical circumcision). On healing, the labia fused together occluding the vagina and partially occluding the urethral opening.

The operation to correct the fused labia included a "reconstruction of vaginal introitus and exposition of urethral meatus." The operation was successful.

No mention was made of the prevalence of acquired vulval atresia in newborns after circumcision in Nigeria nor was data given on the numbers of newborn girls circumsized. From the article it can be inferred that such practices still exist in Nigeria.
Pieters, G. "Gynecologie au Pays des Femmes Cousues."

The author describes infibulation in Africa; the way the operation is carried out both in the village and in hospitals. He describes the obstetrical and gynecological complications it creates. The article was based on the author's experience in Somalia. (French)

This is the French version of the article by Pieters and Lowenfels.

Infibulation is described by the authors as the term given to a mutilative procedure in which the vagina is partially closed by approximating the labia majora in the midline. The article deals with the region around Somalia and the southern tip of the Arabian peninsula where there are millions of women who have undergone this operation and has the title - "land of the sewn women" attributed to it by anthropologists.

Some of the reasons for the procedure include: the protection of women from rape by enemy tribes and slavers; also, to prevent evil spirits from entering the woman's body through her vagina.

A brief description ensues on the actual ceremony in which the operation takes place. Nearly a decade after infibulation, the girl will get married - at the age of 12 to 16 years - and it is explained how either the husband or one of his female relatives will enlarge the vaginal opening with a small knife so that sexual intercourse can take place. Also, at the time of childbirth, the infibulation must again be opened and wider this time; in the villages, the grandmother, who functions as midwife, passes a small knife between the head and the inner wall of the infibulation, completely separating the labia. As soon as delivery takes place, the infibulation is restored, using thorns or simple sutures to hold the tissues together. When deliveries are performed in a hospital, the physician often has to perform an episiotomy when, ordinarily, it would be unnecessary.

Hemorrhage and infection sometimes occur when infibulation is carried out in the bush. Large suprapubic inclusions, cysts and hypertrophic scars after infibulation may require excision. If the vagina has been closed too tightly, hemalocolpos will develop at time of menstruation and must be relieved by opening the adherent labia. Urinary retention can also result. Retained urine can enter the vagina, forming stones. Accidental injuries to the vagina and the bladder during separation of the infibulation at the time of delivery are frequent and can cause troublesome vesicovaginal fistulas.

The authors presented a narrative on the usual techniques employed and several of the more serious complications. However, there was no data to substantiate their findings or examplations as to how they came about this information.
In order to be more informed about the practice of female circumcision, Dr. Schaefer investigated the subject briefly and presents his findings in this article. After a brief introduction into the origin of the practice, the author presents a geographical distribution for the practice. While these practices have had their widest distribution in Africa, no continent is or has been exempt. It is also seen in parts of Asia, Australia, the Americas and also, the Skopizy in Russia.

Varying ages have been reported at which circumcision or infibulation is performed, starting the 8th day after birth to shortly after marriage or childbirth.

Reasons for the rite also vary: to enter into the state of womanhood, the preservation of virginity, to reduce sexual passion, to produce virginal tightening of the vulva, to promote cleanliness, to cause fertility and to prevent labial hypertrophy.

The author delved deeply into Dr. Allan Worsley's article, an abstract of which is included in this bibliography. Like Dr. Worsley, Dr. Schaefer mentions 3 types of operation: introcision, circumcision and infibulation.

As far as complications are concerned, hemorrhage was often uncontrolled and not infrequently resulted in death. Various types of infection, scar and keloid formation, and amputation of a portion of the urethra were not uncommon. Among other conditions noted may be dyspareunia, retention of urine, and formation of vaginal calculi. Cases of dystocia due to the marked scarring have resulted in fatalities to both mothers and infants. However, a large number of women delivered safely; an episiotomy was performed by a midwife making nicks with a razor as the head distended the perineum.

No statistical data were presented in this article. Dr. Schaefer presented here a compendium of information from other articles.

This 1931 article relates general knowledge about the types of operations performed and the reasons given for the procedure. It is not known how the author came by this information or what sources were used, since no bibliography was included. However, Dr. Sequeira may have spent some time in Mukuyu, Kenya and derived his information there.

At that time, the geographical distribution for the operation was the following:

**Africa:** Ancient Egypt. Mohammedans: Gallas, Abyssinians, Waboni, Wassania, Wanyika, Agow, Darfat, Gonga, Sarakolese, Nubinas, Balab-Sudan, Sennaar. Non-Mohammedans: The Bantu tribes of Kenya, Masai (Nilotic-Hamitic); Susu, Mangingo, Peuhlas; some Bechuanas; Babuk, Sierra Leone, Benin, Akra, Old Calabar, Loango.

**Asia:** Arabs, ancient and modern; Kamkatchkans; Malays of East Indian Archipelago, Alfurese Archipelago (most islands).

**America:** Totanacs (Eastern Mexico); Chuncho, Pano, Tunka, and all tribes on the Ucayele (Peru), Tucuna (Western Brazil).

**Australia:** All tribes from Urabunna in the south through the continent to the western shores of the Gulf of Carpentaria.

**Europe:** Skopizy of Russia.

The various types of operations discussed were:

1) A simple gash is made in the pudenda with a flint knife in Eastern Mexico. 2) Clitoridectomy is performed in most of the African tribes. A stone or razor is used. 3) Clitoridectomy, together with removal of parts of the labia minora, is performed by certain African tribes (*vide infra*). 4) Introcision or cutting open the vagina is performed in Australia in those tribes in which ariltha or splitting the urethra in males is practiced.

Infibulation, the uniting of the labia by suture after circumcision, is performed most frequently in the ethnic groups in the north-east of Africa. The age at which circumcision is performed varies from the 8th day of birth to the 8th day before marriage.

The operator is a male in some groups, but more frequently, the office is delegated to a woman.
The author states that, although it is a widespread operation, "no people seem to have any legend or theory as to its origin." Several theories and reasons have been presented by the author: mark of subjection, sacrifice to the deity presiding over fertility, initiation into the tribe, to check sexual desire before marriage, to check hypertrophy of the clitoris and labia minora in certain tribes.

Numerous medical complications may occur not only because of the untrained operator but also because of the unclean instruments. Sepsis is far from uncommon and grave scarring may occur. In some instances a mass of tough cicatricial tissue has been found under the pubic arch, and this constitutes a serious danger. Also noted were dyspareunia, retention of urine, formation of calculi, dangers involved in pregnancies, need for episiotomies, cases of dystocia.

At that time, there was a law in the Colony of Kenya which afforded ample protection to any women who did not desire to be circumcised. But the author stated that "it was unlikely that any girl would seek to avail herself of the law's protection, except at the instance of some outside organization such as a mission." The law cannot compel a man to marry an uncircumcised woman.

In conclusion, Dr. Sequeira states that "coercive measures dealing with age-long customs and beliefs are not only futile but may be dangerous. An elevation of public opinion must precede any radical change in the customs of these races ... limitation of the operation to a simple clitoridectomy would be of enormous benefit."

A general discussion of female circumcision is presented. Its history, geographical distribution and reasons given for its performance are discussed. Also the various types of the operation are described. This portion of the article is based on other sources included in this literature review.

The author studied 4,024 female patients who had either had Pharaonic circumcision (infibulation), Sunna circumcision (removal of the prepuce of the clitoris), or had not been circumcised. All the patients were seen and treated by Dr. Shandall at Khartoum General Hospital between 1962-1966 at the rate of about 20 new patients every week. All were questioned for a history of complications, and complications of childbirth. During routine gynecological and obstetric exams special attention was paid to vulval abnormalities, injuries and infections related to circumcision. Five hundred teenage schoolgirls (daughters of the adult patients) were examined for circumcision and any complications. Comparisons of the medical ill-effects of Pharaonic and Sunna circumcision were made.

After discussing the results of the study, the author concludes that no attempt should be made, for the present, to persuade Sudanese Muslims against Sunna circumcision (removal of the prepuce of the clitoris only) because it is commended by the religion. Also, he believes the quickest way to abolish infibulation would be to allow and encourage Sunna circumcision. The author believes the operation should be performed by physicians in a hospital setting.

To totally eradicate the practice, Shandall suggests that all school children should receive sex education and be taught the implications of the practice. According to the author, women should also be educated through medical and religious discussions of the practice in social clubs and other organizations.

In examining the results of his study, the author found that the ratio of uncircumcised to Sunna circumcised to Pharaonic circumcised patients in the adult groups was approximately 1:4:15 while in the teenage group it was approximately 1:6:6 1/2. The principal difference between these two groups is a fall in Pharaonic circumcision and a rise in Sunna circumcision. The following three tables displays these data.

Table I protrays the incidence of shock, hemorrhage alone, and hemorrhage producing shock according to information from patients themselves or their parents. It shows that these complications were more than six times as common in the adults with Pharaonic circumcision as they were in the Sunna circumcised adults. Nine out of every 100 of these women subjected to infibulation suffered from either hemorrhage, neurogenic shock or both.
In the group of teenagers hemorrhage and shock were about six times more common with those having had pharaonic circumcision. The decrease when compared to their mothers is due, according to the author, to the introduction of anesthesia.

Table I

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of Patients</th>
<th>Shock Only</th>
<th>Hemorrhage Only</th>
<th>Hemorrhage Causing Shock</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent</td>
<td>No.</td>
<td>Per cent</td>
<td>No.</td>
</tr>
<tr>
<td>A</td>
<td>3,013</td>
<td>102</td>
<td>3.38</td>
<td>81</td>
<td>2.69</td>
</tr>
<tr>
<td>B</td>
<td>807</td>
<td>8</td>
<td>0.99</td>
<td>3</td>
<td>0.37</td>
</tr>
<tr>
<td>D</td>
<td>236</td>
<td>5</td>
<td>2.12</td>
<td>5</td>
<td>2.12</td>
</tr>
<tr>
<td>E</td>
<td>227</td>
<td>1</td>
<td>0.44</td>
<td>1</td>
<td>0.44</td>
</tr>
</tbody>
</table>

Retention of urine is more common. It occurred in 10 percent (336 patients) of adults and teenagers who had been infibulated (48 hours after the operation was performed). Of the 336 patients 130 needed catheterization.

Table II

<table>
<thead>
<tr>
<th>Group</th>
<th>Patients</th>
<th>Retention of Urine</th>
<th>Sutures removed for catheterization</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent</td>
<td>No.</td>
<td>Per cent</td>
</tr>
<tr>
<td>A &amp; D</td>
<td>3,249</td>
<td>163</td>
<td>5.01</td>
<td>130</td>
</tr>
<tr>
<td>B &amp; E</td>
<td>1,034</td>
<td>4</td>
<td>0.40</td>
<td>3</td>
</tr>
</tbody>
</table>

* For all tables portrayed, A = infibulated adults, B = Sunna circumcised adults; C = uncircumcised adults; D = infibulated teenagers; E = Sunna circumcised teenagers; F = uncircumcised teenagers.
Table III shows the incidence of infection occurring in the circumcision wound immediately following the operation. In the younger group the incidence of infection remained high for those with Pharaonic circumcision, dropping only to 7.2 percent from 10.09 percent in the adult group. For those having Sunna circumcision the infection rate was much lower -- 1.36 percent in the adult group and .44 percent in teenagers.

Table III
Post-operative Wound Infection in Circumcision

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of Patients</th>
<th>Infection only No.</th>
<th>Per cent</th>
<th>Failure of healing No.</th>
<th>Per cent</th>
<th>Abscess formation needing incision No.</th>
<th>Per cent</th>
<th>Total No.</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3013</td>
<td>207</td>
<td>6.87</td>
<td>63</td>
<td>2.99</td>
<td>34</td>
<td>1.13</td>
<td>304</td>
<td>10.09</td>
</tr>
<tr>
<td>B</td>
<td>807</td>
<td>8</td>
<td>0.99</td>
<td>2</td>
<td>0.24</td>
<td>1</td>
<td>0.12</td>
<td>11</td>
<td>1.36</td>
</tr>
<tr>
<td>D</td>
<td>236</td>
<td>9</td>
<td>3.81</td>
<td>5</td>
<td>2.12</td>
<td>3</td>
<td>1.27</td>
<td>17</td>
<td>7.2</td>
</tr>
<tr>
<td>E</td>
<td>227</td>
<td>1</td>
<td>0.44</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.44</td>
</tr>
</tbody>
</table>

The author also saw two cases, out of the total 3,013 adult women, where vaginal and vulval calculi had formed. Both women had been infibulated. Also 105 of these adult patients who had Pharaonic circumcision had tight infibulation which did not allow intercourse. All were treated surgically with successful results.

Shandall also dealt with 436 cases of non-tuberculosis, chronic pelvic infection. Table IV shows the distribution of chronic pelvic infection among the various groups included in the study. The incidence in the Pharaonic circumcision group is more than three times that in the Sunna group (adults). The author believes the infibulation brings about this high incidence of pelvic infection in three ways: infection at the time of circumcision, interference with drainage of urine and vaginal secretions by the vulval skin diaphragm, and infection of the split and resutured circumcision wound after labor.
Table IV

Chronic Pelvic Infection in the Three Adult Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of patients</th>
<th>Chronic Pelvic Infection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>A</td>
<td>3013</td>
<td>393</td>
</tr>
<tr>
<td>B</td>
<td>807</td>
<td>31</td>
</tr>
<tr>
<td>C</td>
<td>204</td>
<td>12</td>
</tr>
</tbody>
</table>

All 4,024 patients were asked about their sexual satisfaction and results of this inquiry are tabulated in Table V. Eighty percent of adults Pharaonically circumcised have never experienced orgasm compared with 12% in the Sunna circumcision category and less than 7% of those not circumcised.

Table V

Sex Response in the Three Adult Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of patients</th>
<th>Never had orgasm</th>
<th>Had orgasm on less than 50% of occasions</th>
<th>Had orgasm in 50-75% of occasions</th>
<th>Had orgasm in more than 75% of occasions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>Per cent</td>
<td>No.</td>
<td>Per cent</td>
</tr>
<tr>
<td>A</td>
<td>3013</td>
<td>2520</td>
<td>83.64</td>
<td>162</td>
<td>5.38</td>
</tr>
<tr>
<td>B</td>
<td>807</td>
<td>98</td>
<td>12.14</td>
<td>139</td>
<td>17.22</td>
</tr>
<tr>
<td>C</td>
<td>204</td>
<td>14</td>
<td>6.86</td>
<td>29</td>
<td>14.21</td>
</tr>
</tbody>
</table>

Obstetric complications are common for those who have been infibulated; while Sunna circumcision didn't interfere with childbirth in any way. Pharaonic circumcision may result in delay in the second stage of labor by preventing the baby's head from passing through the scarred and obliterated vulva. If, to avoid this, early incision of the circumcision scar is done, this causes an unnecessary loss of blood. Splitting of the circumcision scar is always needed to allow the baby's birth.

Delay in delivery due to the tightness of the vulva is the cause of vesico-vaginal fistulae. The author treated 20 such cases: nine were not circumcised, seven had Pharaonic circumcision and four had had Sunna circumcision.

87
The author also examined 200 prostitutes, 170 had been infibulated, 22 had Sunna circumcision and eight were not circumcised. The ratio of non-circumcised – Sunna circumcised – Pharaonic circumcised was 1:3:21. The corresponding ratio for the other hospital patients in the study was 1:4:15. The author states that one should find a smaller ratio of infibulated females among prostitutes if infibulation truly protects women from intercourse.

Finally, 300 polygamous men (husbands of women in the study) were asked about their opinions of circumcision. All had at least one wife who was Pharaonically circumcised with the others having had either the Sunna version or no circumcision at all. Two hundred sixty-six stated that infibulation had no advantage at all. They preferred non-circumcised or Sunna circumcised wives because their partners enjoyed intercourse more and shared their pleasure. Sixty of these men married their second wife because they did not want to continue the ordeal of perforating the progressively toughening circumcision scars of their wives every time they had babies. Only 34 maintained that coitus with Pharaonically circumcised women was more enjoyable, and these men married their Pharaonically circumcised wives last.

This article was written from the personal experience of the author who was in the Gynecological-Obstetrics Hospital Ward in Odienne, Ivory Coast, working for the Government of the Ivory Coast (under Belgian medical aid). The population of Idenne is about 12,000 people and practically the entire female population was circumcised and authorities continued to perform clitoridectomy and excision of the labia minora. The author explains the actual procedures which he witnessed and also, how, through his silence, he won their trust and was able to give proper medical attention afterwards to the victims who needed it.

Some of the complications which he witnessed were: hemorrhages, secondary infibulation, and urinary disturbances. No specific data on numbers of cases are given.
Sudanese Association of Obstetrics and Gynecologists. The Fifth Congress of Obstetrics and Gynaecology, Khartoum, 14-18 February, 1977. Studies by Dr. Suliman Modawi and Dr. Taha A. Baasher are noted.

Dr. Modawi and Dr. Baasher presented studies they had done on extent of the practice, medical complications and psychological effects.

Dr. Modawi - "Changing Aspects of Circumcision in the Sudan." According to Dr. Modawi his information was drawn from personal communications with midwives and interested Sudanese individuals, medical literature, and a recent pilot survey in Khartoum whereby a questionnaire was circulated to 500 schoolgirls and 500 educated married Sudanese women. Replies were received from 80% of the school girls and 60% of married women. No mention is made of the sampling technique used for distributing the survey nor was the questionnaire included with the presentation.

Dr. Modawi says that in the past only pharaonic circumcision (infibulation) was practiced on Sudanese women (universally). His recent survey results (no date given as to when it was done) indicate that a modified version is now substituted legally (clitoris and upper part of labia major are excised).

According to his survey 97% of all circumcisions were done by trained midwives under aseptic conditions. Three percent were done by doctors. Ninety-four percent used local anesthesia.

He gives the incidence of complications in clinic patients (no mention is made of how many there were) in 1966 as follows:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemorrhage</td>
<td>0.1%</td>
</tr>
<tr>
<td>Injury to tissues</td>
<td>--</td>
</tr>
<tr>
<td>Retention of urine</td>
<td>--</td>
</tr>
<tr>
<td>Vulval abcess</td>
<td>0.1%</td>
</tr>
<tr>
<td>Tight introitus</td>
<td>.3%</td>
</tr>
<tr>
<td>False vagina</td>
<td>.1%</td>
</tr>
<tr>
<td>Coital injury</td>
<td>.1%</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>.1%</td>
</tr>
<tr>
<td>Infected episiotomy</td>
<td>.2%</td>
</tr>
<tr>
<td>Reinfibulation</td>
<td>.4%</td>
</tr>
</tbody>
</table>

Another table showed complications of pregnancy after marriage (19% of those surveyed had become pregnant in the first six months). Again, it is unclear as to the size of his sample; i.e. whether he is referring to clinic patients seen or the 500-person questionnaire.
Dr. Baasher's Study "Psychological Aspects of Female Circumcision" used a survey to investigate community attitudes about female circumcision. The questionnaire study was carried out in Alexandria in January 1977. The author notes that the sample group was not randomly chosen. The target group was Sudanese females.

The following is a sample of the questions utilized in the questionnaire:

"Please note that it is not necessary to put down your name and that the information provided will be treated with utmost confidentiality."

1. Age (or year of birth) __________________________
2. Place of birth ________________________________
3. Nationality _________________________________
4. Religion -- Moslem, Christian, Others
5. Father's education. Mark the highest school level attended.
   No formal schooling     Primary     Intermediate
   Secondary             University or other postsecondary
   I do not know

6. Mother's education. Mark the school level attended.
   No formal schooling     Primary     Intermediate
   Secondary             University or other postsecondary
   I do not know

7. Father's occupation (specify) ____________________
8. Mother's occupation (specify) ____________________
9. Present social status:
   Single       Married       (No. of children
   Divorced (No. of children )
   Widow (No. of children )
10. Present occupation of respondent:
   Student    Housewife    Employed    Others

11. Is circumcision practiced within your family circle?
   Yes _______ No _______

12. How about yourself? Yes _______ No _______

13. How about your elder sisters Yes _______ No _______

14. And your younger sisters? Yes _______ No _______

15. If the answer, in your case, is Yes:
   a) At what age was the operation performed?
   b) And who did it?
       Physician    Trained nurse/midwife
       Village midwife (dayas)    Others
       I do not know
   c) Type of operation
       Sunna    Pharaonic    Other
   d) Do you recall any immediate complications? (e.g. fear, severe pain, bleeding, urinary complication - sect.)
       Yes _______ No _______
       If Yes, please state clearly these complications.

16. Menstruation (monthly period)
   Regular flow Yes _______ No _______
   Accompanied by pain Yes _______ No _______

17. Sex
   a) Desire: Increased _____ Decreased _____
      I do not know _____
   b) Sexual satisfaction: hastened _____ delayed _____
      not affected _____ I do not know _____

18. Do you think it has effects on childbirth?
   Yes _______ No _______
   If yes, specify these effects:
19. Do you think this practice (female circumcision) should continue:

Yes _______  No _______

Please give reasons:

Seventy adult females aged 18-55 anonymously completed the questionnaire.

68.6% (48) of the respondents were 15-25 years old with 35.7% (60) being Moslem and 14.3% (10) Christian. Nationalities included 33 Sudanese, 31 Egyptians, 2 Saudi Arabians, 2 Palenstinians, 1 Jordanian and 1 Yemeni. (The numbers and percent in age categories over 25 were not given.)

55.7% (39) of the respondents were single and 40% (28) were married. 57% (40) were students; 22.8% (16) were housewives; and 15.7% (11) were employed.

70% (49) of the respondents were circumcised, with a similar percentage in their elder sisters compared with 54% (45) in the younger sisters.

51.4% (36) of mothers had either no formal schooling or only attained the primary level while 55.7% (39) of fathers had secondary and university education. 80% (56) of mothers were housewives.

In 57% (28) of those circumcised, the operation was done at age 5-7; 22% (11) at 8-10 yrs; and 10% (5) at 11-13 yrs.

57% (28) of the operations were done by traditional birth attendents, 18% (9) used physicians, 18% (9) used trained nurse/midwives.

Of 49 circumcised females 29 (59%) were Sudanese, 19 (39%) were Egyptians and 1 (2%) were Yemeni.

61% of the operations were pharaonic (infibulation), 39% were Sunna (clitoridectomy).
Under immediate complications, 26.5% experienced fear, severe pain, bleeding, inflammation, and urinary disturbances. There was no difference regarding the monthly period between those circumcised and not circumcised.

On the question of sex the majority of women said they did not know.

82.5% (58) believed the practice should stop, 11.4% (8) were in favor of it and 5.4% (4) didn't know.

Reasons for supporting its continuation were:

1) attenuation of sexual desire
2) hygienic purposes
3) asthetic reasons
4) upholding tradition of Prophet Mohammed
5) allegiance to family custom

Reasons against its continuation included:

1) asthetic reasons
2) basic human rights
3) social (marital) complications
4) physical and psychological health problems

The author notes that this survey indicated that the operation was much more common than generally expected.
Despite its long history and wide practice, there is no conclusive evidence to indicate where female circumcision first originated and how it was initially performed. However, it is the author's opinion that it was first performed on the male and later on the female. The age at which the operation is performed varies from one week to 10 years and over.

In general, the custom is often performed as an integral part of social conformity and in line with community identity. The operator, in many instances, is a non-skilled practitioner, operating under adverse hygienic conditions. This may give rise to serious complications such as surgical shock, bleeding, infection, tetanus, and retention of urine. Later physical consequences include valval labor and delivery with frequent need for episiotomy, and development of urinary fistulae to mention a few. Psychological trauma is almost certain prior to the actual ceremony and may later affect normal sexuality and interfere in marital relationships. Dr. Taba also mentions that this is a tremendous strain on health resources in a developing country for she cites that: "It is estimated, for example, that in a single hospital in one of the countries of the Eastern Mediterranean Region, during the year July 1977 to July 1978, the ensuing complications of female circumcision resulted in 1,967 days of hospitalization."

Anti-Circumcision laws, in general, among traditional social groups were never accepted either in concept or in practice, and they remained alien to the social system and cultural way of life. However, increasing national awareness has proved helpful in approaching such a delicate and sensitive custom and the author feels that promising steps have been taken to discourage the practice.

In 1975, the WHO Assembly gave special attention to traditional practices and their effects on the health of women. In 1976, Dr. Halfdan Mahler, Director-General of WHO, stated that there was a need to "combat taboos, superstitions and practices that are detrimental to the health of women and children, such as female circumcision and infibulation." Also, concerted efforts have been made by WHO's Eastern Mediterranean Regional Office to collect systematically information and stimulate interest in this subject.
A WHO Seminar on Traditional Practices Affecting the Health of Women and Children held in Khartoum, Sudan recommended the following actions:

- adoption of clear national policies for the abolition of female circumcision

- establishment of national commissions to coordinate and follow up the activities of the bodies involved including enactment of legislation prohibiting this custom

- intensification of general education of the public, including health education at all levels, with special emphasis on the dangers and undesirability of female circumcision

- intensification of education programmes for traditional birth attendants, midwives, healers and other practitioners of traditional medicine to demonstrate the harmful effects of female circumcision, with a view to enlisting their support for general efforts to abolish the practice.

Dr. Taba feels that these recommendations should be helpful to all the countries in which circumcision of the female is practiced.
Within Uganda, the only tribe to practice female circumcision is the Sebei, living in a closed area on the Northern slopes of Mount Elgon.

The ritual is similar to the male circumcision: done at or soon after puberty, preceded by a day of fasting, purgation and dancing. The actual operation is performed by a woman and this is an art handed down in families. The instrument used is a spearhead which has been hammered out so that the blade is curved, which often makes the cutting slow and rough. No special treatment is given subsequently to control bleeding and it is recognized that the operation is more dangerous in pregnant women. Death occurring in such cases is, however, regarded as just punishment.

The legal position of such operations was raised in a case, where a patient bled to death and the circumciser was charged with manslaughter. In this particular case, evidence of lack of care was inconclusive and the accused was merely bound over.

Overall, the discussion around the case concluded that this was a difficult problem and the essential consideration was what modifications the people would accept. Firm bandaging to control bleeding and penicillin powder to control infection after the operation seemed simple and effective measures that might well prove acceptable.

This article did not state if the actual trial occurred in an African country or what impact this had on such future mishaps.

This is a detailed article defining the different kinds of female circumcision operations which may be performed and the ensuing medical complications (immediate and long-term). Pictures illustrating complications which arise are also included. Unfortunately, captions do not include specific locations except in the case of the M'Bwake tribe in Zaire where post-operative pictures and a healed vagina were shown.

With regard to the variation in types of female circumcision the author lists types: (1) Circumcision proper (excision of the clitoral prepuce); (2) excision (removal of the clitoris and, in some cases, part of the labia minor); (3) infibulation or partial closure of the vaginal orifice (after excision of all or part of the mons veneris, labia majora, labia minora and clitoris, the raw areas are left to heal across the lower end of the vagina); and, (4) introcision (cutting into the vagina or splitting of the perineum).

The author says that female circumcision has a wide geographical distribution including Africa (South and Central Africa, Mozambique, Egypt, Sierra Leone, Katanga, Kenya, Congo, Zaire, Nigeria, Somalia, Ghana and Ethiopia); Americas (Brazil, Eastern Mexico and Peru); Asia (Kamchatka, Malaysia, Pakistan, nomads in Arabia); Australia and Europe (Skoptsi sect in Russia).

He says that infibulation is practiced in the Sudan, Ethiopia and Somalia and Malaysia. He says introcision is reported among the Duta Pitta tribes in Australia. Age at which circumcision is done also varies (he says) from 8th day after birth to shortly after marriage. Most common age for circumcision is between 5-10 years.

His paper does not contain documented sources for his information either on geographic distribution, age, or type of circumcision practiced.

The medical complications described by the author were all encountered during his tenure in the Sudan where he says that infibulation is almost universal. His impressions are gained from direct clinical observation and through discussion with patients, gynecologists, other medical personnel, teachers and other Sudanese. He also says that many of these complications have been reported in the medical literature. (See below).
Immediate Complications:

shock and hemorrhage (sometimes result in death)

infection (due to lack of cleanliness of instruments and in procedure) resulting in its upward spread which sometimes reach the adnexa;

retention of urine; and

adjacent tissue trauma.

Remote Complications:

malformation of external genitalia;

implantation dermoid cysts and abscesses;

keloid scarring;

coital difficulties;

urinary disturbances;

chronic pelvic sepsis;

infertility;

psychological changes; and

obstetric complications.
This seminar included an in-depth discussion of the practice of female circumcision in Africa today. Both physical and mental health affects were discussed. Representatives from Egypt, the Sudan, Ethiopia, Kenya and Somalia spoke about the extent of the problem in their countries, summarized statistics available and pilot studies which they had initiated. Also included was a discussion of the kind of effort which needs to be undertaken to eradicate the practice.

Fran Hosken of the U.S. spoke on the clinical evidence of female circumcision. She said there is no present evidence that any form of genital operations is practiced anywhere except in Africa and among the Moslem of Malaysia and Indonesia.

It was stated during the seminar that in Africa and the Middle East a survey of 36 countries has provided the beginning of a systematic collection of data. (No reference of who is collecting or how data is being collected was made)

Dr. Solen of Egypt said that because female circumcision is illegal there are no confirmed data on the extent of the practice in Egypt.

Mrs. Assad, also from Egypt, (American University in Cairo) summarized a pilot study which she undertook to determine the extent of the practice in Egypt (data were not included in this draft report).

Representatives from Ethiopia, Kenya and Somalia all agreed that the practice was prevalent in their countries.

In Somalia a survey was made in 1978 interviewing 290 women in hospitals and among university students to determine reasons given for the operation, age of the girls and complications. Data are not included in this draft report (see: Mrs. Edna A. Ismail, WHO Advisor, Ministry of Health, Somalia).
Dr. Modawi, of the Sudan, presented the Sudanese profile of circumcision. A paper by Dr. Sayed (Sudan) presented reasons and motives for female circumcision. Data were collected over a two year period, but were not included in this draft report.

Mrs. Triendregeogon of Upper Volta described the attempts to eradicate the practice there. The Voltaic Women's Organization, in 1974, started a campaign against excision through radio broadcasts. Although the broadcasts dealt only with health problems, she said the campaign caused adverse reactions from both women and men. It was then stopped.

The WHO seminar participants agreed that their aim was to abolish female circumcision.

Suggestions for an effort to accomplish abolition of the practice included:

- more research with the purpose of defining the prevalence of excision and medical complications;
- educating health workers and educated people as the first audience for instruction;
- convincing traditional birth attendants to work with the modern sector in eradicating the practice; and
- using already established family planning services as a base for instituting educational programs.

The author of this article was a former gynecological surgeon at a hospital in Omdurman, Sudan, and presents infibulation and other mutilations from the gynecological perspective.

According to Dr. Worsley, three main types of operation were known at that time:

1) **Introcision**, or cutting into the vagina at an early age. It is believed that this occurs among certain South Sea Islanders and among the Pitta-Patta of Australia.

2) The circumcision of women, paring the edges of the labia, together with excision of the clitoris. This can be found in Africa (Mandingo; Bechuanas; most Bantu tribes; Egypt; Sierra Leone; and, parts of the Gold Coast); parts of Asia, America, Australia and the Skoptozy in Europe - A Russian sect.

3) **Infibulation proper**, which is the aforementioned circumcision, but followed by almost complete closure. The practice in Africa, originated in ancient Arabia and is practically restricted to the north-eastern section of Africa. It is seen throughout the Sudan, Abyssinia, Somalia and is spreading among the Nubians and pagans of the Southern Sudan.

The operators may be men-priests and medicinemen, barbers and male relations - or women professionally trained by the tribes, midwives or even blacksmith's wives (parts of French Sudan).

The preservation of virginity is deemed to lie at the root of this custom. A vague sort of link, entirely without theological grounds, has sprung up between circumcision and religion, and much superstition enshrouds it too. Other reasons stated for the practice are: custom; reducing sexual passion; to produce a virginal tightening of the vulva; cleanliness; to promote fertility; to preserve mother and child from dying; to prevent labial hypertrophy; and also, as a legal status, for in some tribes, a woman cannot inherit property unless she has been circumcised.

Dr. Worsley stated that various types of cellulitis and pocketed infections of pus occur. Keloid of the scar is present in 50% of cases. Keloid formation is much more usual in the
Sudan. One of the common complications is when the mouth of the urethra is sliced off too so that the urethra becomes incorporated in the wound.

The article also presented a table of ages for circumcision and infibulation combined:

8th day after Birth: Abyssinia
Few weeks after birth: Arabia
3 to 4 years (circumcision): Somalis
3 to 8 years: Copts
6 to 7 years: Sudan, Modern Egypt
8 to 10 years (infibulation): Somalis
9 to 10 years: Upper Egypt
10 years: Peru
14 to 15 years: Australia, Ancient Egypt, Bantu tribes
Shortly after marriage: Masai
After bearing children: Swahili, Guinea

This 1938 article by Dr. Worsley did not present any data or specific case studies. As such, it is unknown how the author verified his information about the practice in other parts of Africa. However, at that time, the British Government has established a training center in the Sudan for native midwives and made registration compulsory. It is unknown if these centers are still in existence or what impact, if any, they played in introducing hygienic methods to the country.

Ms. Young recounts an eye-witness account of an operation in the Sudan. She is an ex-principal from a Midwives Training School in the Sudan.

Two types of circumcision are explained: (1) "Sunna" type - which is the excision of part or the whole of the clitoris, but which is seldom found in the Suda. (2) "Phraonic" circumcision - removal of "labia majora" and "labia minora" and sometimes the removal of part of the clitoris.

The purpose of the custom is mainly to prove virginity at the time of marriage; also, as an aid to chastity in that it decreases the sexual desires of girls. The article reports that "... it is also said that the result of the operation and the closing of the vingal orifice appeals to the male sadistic pleasure." This, however, is unsupported by the author's local knowledge of the native outlook. Failure of the husband in this tribe to effect penetration, on the other hand, is looked upon as degrading and will involve him in a fee to the mother-in-law if steps have to be taken to facilitate consummation of the marriage. Another financial factor which cannot be ignored is that the old family midwife derives a certain part of her livelihood in performance of this ritual, so that she does not encourage suppression of the custom.

The age of the girls may vary from 4 to 10 years; two sisters frequently being operated upon at the same ceremony, the elder waiting until the younger is old enough. Usually, the operation is performed by an untrained midwife who uses the blade of a "cut-throat" razor or some locally made instrument.

It was only a few years before the publication of this article that Government-trained midwives were permitted, in fact taught, to perform this operation on the assumption that they carried out the lesser form and with more hygienic methods, in order that the wound might be less extensive, less septic, and the scar tissue less granular. Later, however, none of the trained midwives were permitted to use their government midwifery equipment for this practice. They were taught how to treat brides when they or their husband desired remedial repair of the impossibly small vaginal orifice.

Ms. Young was so revolted by the spectacle of the operation that she took immediate steps to prevent any future operations being conducted by their staff midwives. The author also makes a plea to the Government to help stamp out the practice.
II. C. CASE STUDIES


Using two actual case descriptions which occurred in Nigeria, the author points out the dangers of female circumcision. The author is a medical doctor in the Department of Obstetrics and Gynecology, University of Benin Teaching Hospital, Benin City, Nigeria.

He says that female circumcision is still a common practice in Nigeria. These two cases occurred in the university hospital.

Case 1. A patient was booked for antenatal care and delivery on December 4, 1973 because of previous poor obstetrical history. The patient had undergone circumcision (with removal of the glans clitoris and part of the labia minora). After about six hours of labor the cervical dilation remained unchanged despite good uterine contractions. A lower transverse Caesarean Section was performed because of her previous history and a live baby (6 lbs. 6 ozs.) was delivered.

On the first post-operative day the mother's temperature rose to 102°F. On the third post operative day the abdomen became grossly distended. On the fourth day there was serosanguinous fluid oozing from the lower part of the abdominal incision. A diagnosis of wound evisceration was made.

Before exploration, the vagina was cleansed for catheterization and was found to contain multiple foul-smelling necrotic spots which were areas of injury during circumcision. During abdominal toilet, the peritoneum was also found with diffused necrotic spots similar to that present in the vagina. After necessary wound debridging the abdomen was closed. On the first day of post-wound disruption repair the temperature rose to 106°F, the patient became comatose and died.

Mid-stream urine for culture and sensitivity grew Escherichia coli. High vaginal swab and culture from the abdomino-pelvic peritoneum grew E. coli and Klebsiella organisms. On the day of the death of the mother the baby suddenly became lethargic and developed a 106°F. The baby was treated for septicaemia but died the following day. The baby's blood culture similarly grew E. coli and Klebsiella organisms.

Case 2. An eight month old child was brought in because of its inability to pass urine. When she was eight days old
she underwent circumcision by a traditional operation. This healed with complete fusion of both labia minora leaving a pin hole high up in the fused labia through which occasional spouts of urine were passed. The baby was able to manage with this until a few days before admission when the bladder became distended to the level of the umbilicus, necessitating a suprapubic cystostomy to decompensate it.

On admission the diagnosis was a vulval atresia with urinary retention and probable hydrouretex hydronephrosis secondary to circumcision.

The vulva was incised to the midline to a depth of 1-1.5 cm. to gain access to the vaginal introitus. Almost immediately 400 ml. of urine was passed. The wound was completely healed by the twelfth post-operative day.
Bitho, M.S. et. al. "Les Accidents de la Circoncision."
Bulletin de la Societe Medicale d'Africque Noire

The authors study 12 cases of male and 3 cases of female accidents arising from circumcision which were received at the University Teaching Hospitals at Lome and Dakar over a period of three years. The authors reviewed the publications concerning this complication. They describe the different anatomical lesions encountered and their treatment.

The authors have noted that female circumcision can lead to various complications. A summary of the problems encountered with the three female cases in the study are as follows:

Case 1. A female, age 50 was received for complete retention of urine. She had her clitoris excised at the age of 10. Micturition problems occurred since she was 20. However, she experienced severe urine retention for the last 5 years.

Case 2. A female, age 23, was seen following a conjugal problem. She had been married for 48 hours, but was on the verge of being rejected by her husband because she had no vaginal orifice. She was excised at the age of 5, following which she did not show any genital malformation. Under local anesthesia, her vagina was opened. Several months later, the patient returned pregnant.

Case 3. A female, age 24, came in with severe abdominal pain. Upon examination, it was found that the labia minora had coalesced following her excision at 14.
After giving a brief description of infibulation (as described by other bibliographic sources noted here) the author lists medical complications:

The immediate complications, to be expected are:

- shock which may be neurogenic or may follow hemorrhage;
- hemorrhage, which may be fatal, may be primarily from the perineal branches of the external pudendal artery and the dorsal artery of the clitoris or secondary following infection of the wound;
- injury to adjacent structures, urethra, bladder vagina, perineal and anal canal, may be sustained,
- infection, such as urethritis, cystitis and abscesses may occur;
- chronic pelvic infection may eventually follow; and
- retention of urine may be caused reflexively, immediately after operation. This may follow urethral strictures when the urethra is infected or injured, or occlusion of the external meatus by a skin flap.

The latter gynecological complications, so far reported, are:

- infertility due to chronic pelvic sepsis and inability to have sexual intercourse (Sequeira);
- implantation dermoids (Hathout);
- menorrhagia as a result of chronic pelvic sepsis;
- dysmenorrhoea due either to chronic pelvic sepsis or to obstruction of the menstrual flow by a pinhole introitus;
- cryptomenorrhoea leading to haemtoocolpos or haematometra;
- keloid scar formation (Worsley);
- vaginal calculi (Sequeira); and
- delay in the onset of menarche (Wilson and Sutherland).
He next portrays obstetrical complications of childbirth using three case studies of Sudanese women admitted to British hospitals in England. These studies follow:

Case 1. A 24 year-old Sudanese woman in labor was admitted to the obstetric units at the City General Hospital, Sheffield. A vulva deformity had been noted during the antenatal period at the local authority clinic, though it had not been considered severe enough to interfere with parturition. The patient had undergone ritual circumcision at the age of 4 in the Sudan, where she had lived until the previous year when she had travelled to England with her student husband. A pregnancy 18 months before had ended in a complete abortion after ten weeks amenorrhoea.

On examination, amputation of the clitoris was obvious. The introitus admitted three fingers and fusion between the labia created a hooded effect anteriorly over the urethral orifice. Posteriorly, the fourchette and posterior parts of the labia were normal.

Vaginal examination confirmed that the patient was in labor, and two hours later she was delivered. As the fetal head descended the perineum a right posterolateral episiotomy was performed under local anesthesia. With one hand controlling the fetal head, it was possible to ease the anterior hood over the head and the patient delivered a female infant, weighing 2.977 kilograms. The third stage and puerperium were uneventful.

Case 2. This 22 year-old primigravida was first seen at the antenatal clinic at the City General Hospital, Sheffield, when 31 weeks pregnant. She had had a ritual circumcision at the age of seven in the Sudan.

On examination, the clitoris has been excised and the labia minora were fused though not completely. Posterior to the fused labia there was a good vulval orifice and it was considered that division of fused labia during labor or a large episiotomy would suffice.

The pregnancy progressed uneventfully and the patient was admitted at term in labor. Because of delay in the second stage of labor a forceps delivery with a right posterolateral episiotomy was performed. The episiotomy and controlled descent of the baby's head by the forceps allowed the baby's head to be delivered under the hood without division of the fused labia.
being required. The baby weighed 2.778 kilograms. The
third stage and puerperium were uneventful.

Case 3. A 21 year-old Sudanese gravida-four patient
arrived in England at 36 weeks' amenorrhoea. Infibula-
tion had been performed in the Sudan when she was seven
years old. She had had three pregnancies at home in
the Sudan, the largest baby weighing 2.750 kilograms.

Because of a vulval deformity she was referred to
the antenatal clinic at the Jessop Hospital for Women, Sheffield, soon after her arrival in England. On
examination there was no clitoris, and some fusion of
the labia gave a 'hooded' appearance. The perineum
was scarred and deficient.

The pregnancy proceeded uneventfully, the patient
went into labour spontaneously at term. A forceps
delivery with a right posterolateral episiotomy was
performed because of delay in the second stage of labor. Again the episiotomy allowed the anterior hood to be
pushed up over the head of the baby who weighed 4.396
kilograms. The third stage and puerperium were unevent-
ful.

The authors state at the beginning that the effects of ritual female circumcision are seldom seen in Great Britain and information about the precise deformities resulting from the practice is not easy to obtain.

In this brief article, a general definition is given of two main types of procedure - excision and infibulation. Numerous complications have been described by others as a result of this practice - hemorrhage, deep scarring as a result of infection or keloid formation, and extensions of the incisions into the urethra or rectum.

A case report is presented in which a 22-yr-old Sudanese woman was referred to the antenatal clinic of the City General Hospital, Sheffield, because examination elsewhere had revealed an extensive vulval deformity. The patient was 27 weeks pregnant. The vulval abnormality - adherent labia minora completely obscuring the introitus, leaving a tiny opening into the vagina - was later discovered to be the result of a ritual operation performed on the patient when she was 11. According to the patient, the procedure was, in 1962, illegal, though still sometimes performed. Since her marriage, normal intercourse had been impossible. The sealed labia were incised to expose a normal introitus and vagina. From that time onwards, the pregnancy progressed satisfactorily and intercourse had been possible and not painful.

The author discusses briefly the general types of female circumcision and the reasons for this practice which vary from one community to another. Some mentioned: as a means of attenuating sexual desire; for the Abyssinians and Hottentots who have a notorious hypertrophy of the labia minora—an excuse for the operation on aesthetic grounds; however, tradition has been the main factor in perpetuating the custom. Some of the complications associated with radical circumcision are hemorrhage, infection, urethral injury, keloid, dysuria, dyspareunia, and even vaginal calculi are well-known complications. Bartholinitis often occurs, and Bartholin's cysts develop following occlusion of the duct. In some cases total colpocleisis inadvertently ensues, causing cryptomenorrhoea and haematocolpos with or without haematosalpinx and haematometra. Sometimes, the introitus is too narrow to allow intercourse; scores of brides had to be helped surgically.

A case of implantation dermoid of the clitoris resulting from the circumcision is described. (23 year-old female, circumcised at eight, came with swelling which had grown from the size of a grape to that of an apple in three years.) The author says that the cyst's attribution to the circumcision wound is justified, though the complication is rare both in practice and in the literature.
Dr. Laycock was not able to witness any circumcision operations and his information on the subject is derived from descriptions given by Somali dressers and nurses and from his own observations of the pathological sequelae.

Infibulation appeared to be a universal practice in Somalia, not considered an evil, nor one that should be discouraged. It is carried out on girls between eight and 14. Among the Somalis, excision is just a part of an operation whose main purpose is occlusion. Defibulation consists of making a short incision to separate the fused labia minora, done either by a Midgan woman (midwife) or by the husband for intercourse and later for childbirth.

As a surgeon, the author's interests lie in the complications of these operations. Infibulation may be complicated by changes in the scar and by obstruction of the urethra and vagina. Defibulation may be complicated by local sepsis, injury to the rectum and apparently, as a late complication, by uterine prolapse.

The author then presented 10 case studies which are herein presented in full since they represent various complications which may result from infibulation.

Case Histories:

Case 1. U.A., aged 24 was a healthy Somali woman. In Hargeisha Hospital 1/23/49 to 2/2/49. Her only complaint was of a tumor of the vulva. This was excised intact and found to consist of a thin walled sac the size of a large orange lying exactly in the mid-line in the scar tissue between the fused labia minora. It had the characteristics of a simple dermoid cyst.

A more serious sequela is a pseudo-elephantiasis of the vulva due to gross sepsis and lymphatic obstruction following infibulation.

Case 2. A.H., aged 18. Admitted to Hargeisha Hospital 7/15/49. Healthy Somali girl but said that severe sepsis followed infibulation that enlargement of the vulva dated from this. The whole of the vulva was extremely swollen and indurated and had a coarse granular surface. The process involved also the lower 1" of the vaginal wall and there was a foul, purulent vaginitis.
After thorough preliminary dressing and douching it was possible to excise the whole mass of indurated tissue and then reconstruct the vulva after wide undercutting of the skin and mobilization of the vaginal wall. There was surprisingly little infection and primary healing took place.

Case 3. Another case was a primipara, seven months pregnant when first seen. The condition was the same, a gross, symmetrical lymphatic edema of the tissues of the vulva with so much induration that normal delivery seemed out of the question. She could not be persuaded to stay in the hospital for Caesarean section and was lost sight of.

The use of thorns in approximating the labia made one wonder whether there was any risk of a mycetoma arising as a local complication of infibulation. Mycetomas are common in Somaliland and are usually due to injury by infected thorns. Dr. Laycock did not come across such a condition, but noted that it would be interesting if it could be recorded by other observers.

The obstructive sequelae of infibulation are of great importance. A primitive operation whose aim is occlusion may well proceed further than it is meant to and obstruction of both the urethra and vagina may be severe. The urinary stream is interfered with in any case by the shelf formed by the fused labia lying over it and catheterization, if for any reason it is necessary, may be very difficult and only possible after forcible retraction forwards of this shelf. Quite commonly, the urethra is involved in local sepsis and a number of cases among adolescent girls were seen in which cicatrization around the external urinary meatus had produced a tight stricture and acute urinary retention.

Obstruction of the vagina is another common and serious complication. Some Somalis have said that this is sometimes deliberately produced by the introduction of an irritant, such as rock salt, at the time of infibulation, but others, whom Dr. Laycock had questioned, denied this. It is quite likely that narrowing and even complete blockage of the vaginal lumen may be the sequela simply of a vaginitis which
follows septic infibulation. Narrowing may be slight, obstruction may be almost complete with intermittent retention of the menstrual discharge, or it may be absolute with the formation of a large haematocolpos.

Clinically, these cases of vaginal obstruction present as two groups:

1. Unmarried girls with amenorrhoea, monthly abdominal pain and a lower abdominal mass which may be large; and

2. Cases with obstetrical complications due to failure of the soft parts to dilate during labor.

Case 4. Haematocolpos as a complication of infibulation:

A.D., aged seventeen. Admitted to Hargeisha Hospital June 1949. Normal healthy Somali girl. History of absolute amenorrhoea. Infibulated about the time of puberty. Complained of a mass in the abdomen and lower abdominal pain every month lasting about ten days. The mass was firm and tender and rose about two inches above the symphysis a little to the left of the mid-line. Half an inch to one inch above the introitus the vaginal lumen was blocked by a bulging purple septum. At operation the fused labia minora were separated and the vaginal septum, which was quite thin, was incised releasing about half a pint of thick, non-offensive, dark red blood. The abdominal mass disappeared at once. There were no complications.

Case 5. K.R., aged twenty. Admitted August 1949. History of losing a little blood P.V. once only three (3) years previously; otherwise had never menstruated. Complained of monthly lower abdominal pain and a mass. This was hard, spherical and as large as a big orange and it was at first mistaken for an ovarian cyst. At operation the labia minora were separated and the vagina explored. The lower one inch of the vagina appeared normal.

An inch above K.R.'s introitus the lumen of the vagina terminated abruptly. The wall of the vagina was incised above and scissors pushed
through a septum nearly half an inch thick. Ten to twelve ounces of thick chocolate colored fluid were evacuated. The mucous membrane of the vagina above the obstruction appeared normal. The opening made at this operation was dilated three times at weekly intervals. Where there is much scar tissue this dilation is obviously important and the patient should be urged to attend for follow up and further dilation as necessary.

It is hardly surprising that the multilation of the vulva produced by infibulation, and more particularly by subsequent septic infection, should produce a condition of the soft tissues incompatible with parturition. The native midwife attempts to treat such obstructed labor by free incision of the tissues, i.e., she carried out an extended defibulation, but undoubtedly many mothers die in childbirth because normal delivery is impossible. Two cases below are quoted in illustration.

Case 6. I.J., aged 18, primipara admitted to hospital for treatment of a mycetoma. Normal, healthy young woman. Labor commenced at term. Ten hours after the commencement of pains the fetal head was well down on the perineum but was hidden because the labia minora were still fused together and only a small opening, capable of admitting a single finger, was present behind their line of fusion. It was difficult to believe that defibulation had ever taken place or to see how sexual intercourse could have occurred. The scar between the labia was incised and the fetal head, which was in the occipito-posterior position, was rotated and delivered with forceps, using a small episiotomy. Mother and infant made normal progress.

Case 7. T.H., aged 20, primipara. Gave a history of painful and infrequent menstruation (one in two to three months) and amenorrhoea for five months before the commencement of pregnancy. Delivery took place at term and she had been in labor three days with a Midgan midwife in attendance before admission to the hospital. A tight ring-like stricture with a minute orifice, admitting only a probe, was found in the upper part of the vagina. An incision was made posteriorly through this stricture. The face was then seen to be presenting.
Forceps delivery was carried out and later manual removal of the placenta. The fetus was dead and slightly macerated. The mother made an uncomplicated recovery.

Cases 6 and 7 resemble one another in that in both, labor was obstructed by an external narrowing of the vagina, though the level of the narrowing was very different in the two cases. The presence in both of an abnormal presentation is considered a coincidence.

Case 8. A.A., aged 19, admitted to Hargeisha Hospital in August 1949. She said she had been infibulated when aged 14 and defibulated at the time of marriage two months before admission. Her only complaint was of an unhealed wound of the rectum but no fecal incontinence. The infibulation scar between the labia was found to be intact but there was a perineal laceration extending from the vagina to the anus and allowing a slight prolapse of the rectal mucous membrane. This was not deep and there was no evidence of damage to the muscles of the pelvic floor. A small posterior colpoperineorrhaphy was carried out.

Case 8 and the conception of defibulation as a clumsy and inaccurately placed gash in the perineum, often complicated by sepsis, may suggest an explanation for the following two cases the author encountered, of uterine procidentia in young nulliparous women, a condition otherwise not easy to explain. It is quite conceivable that a deep septic wound of the perineum might damage the muscles and fascia of the pelvic floor sufficiently to cause a uterine prolapse. No other explanation was apparent in either of these cases and they are recorded there on the theory that uterine prolapse may be a sequel to the trauma caused by badly performed defibulation.

Case 9. A.A., aged 25, admitted December 1949. History of infibulation when aged 13. Menstruation began at the age of 17. She was married and defibulated when aged 18. The defibulation incision became very septic and there was a discharge of pus for a long time. Uterine prolapse occurred about a year after marriage. The patient could offer no explanation of the prolapse. She was never pregnant. Examination under pentothal showed complete uterine procidentia. The labia minora were fused. There was very little scarring of the vulva and its tissues were quite elastic.
The prolapsed uterus and vaginal wall were not ulcerated or inflamed and the cervix appeared healthy. The uterus was scarcely enlarged and was quite mobile. The adnexa were normal and so was the abdomen. Ventrosuspension and colpo-perineorrhaphy were carried out. Apart from mobility of the uterus nothing abnormal was found in the abdomen.

Case 10. B.A., aged 20, admitted March 1949. History of rapid descent of the uterus about a year before admission. She could offer no explanation for this. She claimed to be a virgin and denied ever having any local injury or interference apart from infibulation, which was performed when she was 14. Her history was maintained consistently but I felt sceptical about it. There was complete uterine procidentia without ulceration or infection. There was also a large ovarian tumor. At operation a right ovarian teratoma as big as a grapefruit was removed, ventrofixation of the uterus was effected and anterior and posterior colpo-perineorrhaphy performed.

Convalescence was uneventful. The presence of the ovarian tumor is considered incidental and unrelated to the procidentia.

The few cases quoted could undoubtedly be multiplied indefinitely but enough has been said to indicate the widespread physical suffering that exists and will continue to exist until, in the words of this author, the moral and anesthetic standards of the Somali people are so changed that these practices are done away with.

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