Monitoring the Progress of Diarrheal Cases During Initial Rehydration

DIARRHOEAL DISEASES MANAGEMENT
SELF INSTRUCTIONAL SERIES-No 2

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Monitoring the Progress of Diarrheal Cases During Initial Rehydration

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INTENDED USERS :

Within the context of the task-based curriculum for practicing physicians, residents and house-officers

POTENTIAL USERS :

Newly appointed physicians
Undergraduate medical students
Undergraduate students of the High Institute of Nursing

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TO THE LEARNER

This is a self instructional unit that covers a specific topic in the area of diarrhoeal diseases control. The unit is self contained.Learning is individualized. Upon completion of the unit you will be expected to accomplish the objectives covered in the topic. So, it is important that you follow closely the directions stated.

DIRECTIONS

1- Read through the unit in sequence from beginning to end.
2- Read carefully the objectives. They will tell you what you are expected to learn from the information in the unit.Such objectives also indicate what you will be asked on the post test at the end of the course.
3- Read the information in Section 1
4- Write your answers to the practice questions at the end of information section 1 on a separate sheet of paper. Do this without looking back at the information.
5- After you write your answers,look at the answers given on the next page,in order to check your work.
6- If any of your answers are incorrect,go back and read information Section 1 again. Then make sure that all your answers are correct before moving on the next section.
7- Proceed through the entire unit in the same manner.

TO THE TRAINER

Suggestions below are various learner's activities for preparation and follow up study.

SUGGESTED PREPARATION

1- Learners should be able to identify clinical manifestions of diarrhoea,dehydration and complications.

2- They should have been exposed to the case management of Acute Diarrhoea in Childhood Self instructional Unit.

SUGGESTED FOLLOW UP

Once learners are exposed to this unit,they should work in a rehydration center in the treatment area. they should follow the progress of at least two children till complete initial rehydration is done. Their performance should be checked using the task based performance observational sheet.

REMEMBER

Distribute this unit at the end of day 3 .
Instruct the learners to read the material carefully and follow up the directions .
Next day make sure that the learners responded correctly to the questions.
Discuss their problems .
Use the progress test as a post test for this unit to ensure that they really learned the subject.

INTRODUCTION

Diarrhoea is a self limited disease which usually ends spontaneously within 3-5 days. Diarrhoea itself is not considered dangerous as long as the child is being compensated for his fluid and electrolyte loss. If not, dehydration may occur which is the true danger to life. Many thousands of Egyptian children die every year because of dehydration from diarrhoea.

In order to try and save these innocent lives,dehydration should be corrected. For the majority of cases this can be achieved effectively and relatively cheaply by using oral rehydration therapy. It is given by cup and spoon. As a physician in a rehydration center, it is not enough to assess your patient and write down your plan of action. You should follow up your case. For this reason a rehydration center,is a different facility than any outpatient clinic.

In the first section of this unit you will understand how to prepare and arrange the treatment area in the center. In the rest of the sections you will learn how to monitor a child during oral initial rehydration.In the second section you will read about monitoring the child during the first cup of ORS. In the third section you will read about monitoring the progress of the child after one hour. In the last section you will read about monitoring the progress of the child every hour. You will understand that during your monitoring you may have to refer your patient for nasogastric or intravenous therapy.

Through all your readings, you will acquire the necessary skills for taking actions and deciding correctly what to do.

PREREQUISITES

All learners should have learned to examine paediatric cases,identify signs and symptoms of dehydration and its complications. All should have read the Self Instructional Unit :CASE MANAGEMENT OF ACUTE DIARRHOEA IN CHILDHOOD

OBJECTIVES

Upon completion of this unit,the learner will be able to:

1- Identify the layout of the treatment area
2- Given a list of equipments,identify those needed for oral rehydration area.
3- List the items to be monitored during
   - first cup
   - at the end of one hour
   - hourly
4- Given several case histories encountered in oral rehydration area will be able to take correct actions and decisions as regards:
   - vomiting
   - sleepy child
   - thirsty child
   - child not drinking enough or refusing ORS
   - referring child for other rehydration therapy

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INFORMATION SECTION 1

THE TREATMENT AREA

The oral treatment area takes up the majority of the space of rehydration center. It is in this area that mothers and children spend most of their time. The NCDDP has provided specially designed chairs with a hole that has been cut in the writing surface to hold the glass and prevent it from spilling. The mother's chair was so designed so that the mother can hold the child in the correct position in her left arm and give the child ORS with her right hand.

Benches may be provided in addition to the mother's chairs particularly in rural areas. Mothers of rural origin may prefer to sit cross-legged on these benches when feeding their children. The number of chairs and benches should be appropriate to the available space. Do not allow crowdiness

THE TREATMENT AREA

Now how can one arrange these chairs or benches ?

The health team of the center need to move freely and have to supervise as well the mothers while they are giving the fluid. To achieve this you have to place the chairs/ benches around the walls of the room facing inwards. This arrangement ,dear doctor, leaves the room completely open. This is not a waste of space.In fact this is ideal as it serves the following purposes:

- o Allows the staff member to move freely around the treatment area.
- o Allows mothers to go to and from the dispensing area without blocking or crowding the treatment area.
- o It encourages interaction between mothers as they face each other and can watch what they are doing.

To maintain the cleanliness of this area at least one or two waste baskets should be properly placed.

The treatment area should be adequately ventilated and its temperature should always be controlled. If the center is equipped with an air conditioning unit,the treatment area must be entirely closed. Do not allow doors or windows to be left opened.If the center is equipped with a ceiling fan,then arrange the chairs or benches in such way that children who are being rehydrated are placed between the fan and open window or door way. In this way they will receive the maximum effect from the fan.

In the treatment area,you are supervising,checking, and monitoring the progress of the child. So,you should always have access to a stethoscope and a thermometer. Moreover, you should be a model to nurses and mothers especially in hygienic practices. Wash your hands immediately after handling a case. This will entail ,either the presence of a sink with running water,or a basin with a disinfectant. The provision of clean towels ,is also necessary.

Be aware that the center staff are hosting the mothers who spend most of the time in the treatment area. So, this is the area that should be most attractive and well decorated. Your rehydration center,particularly the treatment area should reflect the personality and background of the people who are operating the center. The area should be clean. Use pictures and posters as a decoration. These materials should also convey health messages to nurses and mothers.

At least one treatment chart written in Arabic should be hung on the wall of the rehydration center,so the staff may refer to it as necessary. Other educational materials should be readily available,where mothers can be exposed to the health messages while they are feeding their children with ORS. It is also preferable that you provide guidelines and instructions to staff. This will be useful for the daily management of the treatment area and cases.

The following table indicates the equipment and supplies needed for oral rehydration treatment area.

TABLE 1

EQUIPMENT AND SUPPLIES FOR TREATMENT AREA

Chairs (benches) arranged in a circle
Waste basket(s)
Towels
Stethoscope
Thermometer
Guidelines
Treatment chart
Posters-picture

Make sure,dear doctor, that these supplies and equipment are present and properly arranged.

INFORMATION SECTION 1

PRACTICE QUESTIONS

1- Check [✓] which of the two figures is showing the correct way of arranging an oral rehydration treatment area and why?

FIGURE A [ ]

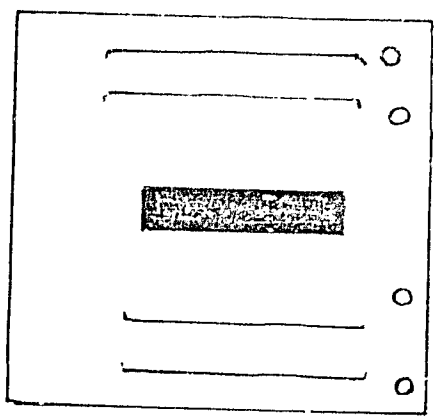
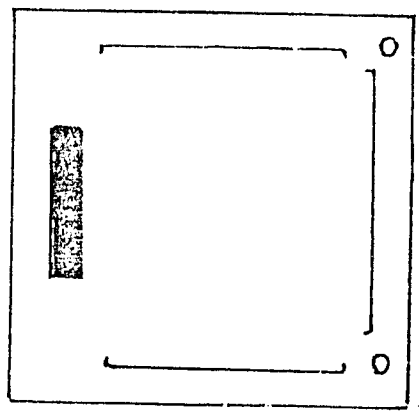


FIGURE B [ ]



Complete the following statements:

2- If the treatment area is equipped with an air conditioning unit, the treatment area must be ....

3- If you are using ceiling fans, place the patient between the fan and .... or .....

4- In the treatment area in a rehydration center, the doctor is supervising and checking the ..... made by the child. The doctor must always have a ..... and a ..... ready at hand.

5- On the walls of the treatment area there should be posters, pictures and ...., the latter is a guide for the staff of the treatment area.

6- Complete the list of equipment needed for oral rehydration treatment area:

- Stethoscope
- Thermometer
- Guidelines
- Treatment chart
-
-
-
-

INFORMATION SECTION 2

ANSWERS TO PRACTICE QUESTIONS

1- Figure B as it allows an open space for staff to move freely, and be able to supervise mothers. Also it enables mothers to go to and from the dispensing area.Also they will be able to interact with each other.

2- If the treatment area is equipped with an air conditioning unit,the treatment area must be **entirely closed.**

3- If you are using ceiling fans, place the patient between the fan and **an open window or door way.**

4- In the treatment area in a rehydration center,the doctor is supervising,checking the progress made by the child. The doctor must always have a **stethoscope** and a **thermometer** ready at hand.

5- On the walls of the treatment area there should be posters, pictures and **treatment chart.** The latter is a guide for the staff of the treatment area

6-

Chairs-benches arranged in a circle
Waste basket
Towels
Posters-pictures

Now you are in a position to learn about the actions done and decisions made in the treatment area.

INFORMATION SECTION 2

MONITORING THE PROGRESS OF THE CHILD DURING THE FIRST CUP OF ORS

Dear Doctor

The most important difference between a rehydration center and an ordinary paediatric outpatient is that a major portion of the treatment is conducted in the rehydration center,where the child is kept under observation until he is initially rehydrated. The child and the mother are kept under your care and supervision for a period of 2-6 hours in the treatment area depending on the degree of denydration.

Before the child comes to the treatment area,he has been assessed and the management plan was decided upon So, if you are the only doctor in the rehydration center,you will be the one who assesses the child and write down the plan of manangement. If there are more than one physician,then the first thing you have to do is to obtain the management plan ,preferably in writing Revise it and then carry it out.

You have to monitor the progress of the child ,during the first cup,after first hour and then hourly.If there are more than one physician available,the child should be monitored by the same physician so that a more accurate comparison of the child's status can be made to track the child's progress.

Dear Doctor

The mother will pass by the dispensing area before she comes and sit in the treatment area. In the dispensing area the nurse will initiate oral rehydration by dispensing the first cup of ORS. She will demonstrate to the mother how to hold the child, and how to feed him. She will give instructions about what she will do if the child vomits,or falls a sleep and to call the nurse if she can not cope. The nurse should also tell the mother to return back to refill her cup. In the dispensing area the nurse should demonstrate how to mix ORS, and should track the quantity consumed by the child using a tick mark or adhesive tape.

THE NUMBER OF CUPS ACTUALLY CONSUMED BY EACH PATIENT SHOULD BE ACCURATELY RECORDED

Dear doctor, you have to observe the mother and the child during the first cup of ORS carefully. You know that the child should be held in an upright position during the administration of ORS to facilitate swallowing and prevent choking or vomiting. So observe carefully the mother, if she is holding the child incorrectly you should show her how to do so. Always reinforce the nurses' instructions. You have to make sure that the mother is following the instruction given. You should always explain why you are asking her to do so. **Tell her that if the child is held upright, this position can prevent him from choking or vomiting.** In our community you as a doctor is highly respected. All members of the community value your opinion.

Observe how the mother is holding her child

The second important thing that you have to observe is the rate of administration of ORS. The mother should be giving her child one teaspoon (5cc) every minute. One 5cc spoon per minute is really a leisurely rate of given ORS. Don't you agree ? Well close your eyes and count sixty. Now can you realise how long a minute really is ? Indeed as slow as this rate may seem to you it actually provided 300 ccs (5X60) per hour, and nearly always prevents vomiting. **So if the mother is giving ORS too quickly or too slowly, you should sit with the mother for a few minutes and show her the correct rate of administeration.** This will also prove to the mother that you really care

ADMINISTER ORS AT AN AVERAGE RATE OF 1 TEASPOONFUL PER MINUTE

Sit with the mother and show her how to give ORS

The third thing is that you have to look carefully to see if the child is accepting ORS or not. The dehydrated child (whether mildly or moderately dehydrated) is a thirsty child. He will continue to take ORS until he is no longer thirsty. That is to say until the dehydration is corrected. You may encounter,however,few cases that may refuse ORS. So, what should you do in these cases?

First re-examine the child.If there is no obvious signs of dehydration, and the child is refusing to drink,it means he is not thirsty. Reconsider your diagnosis. This child has diarrhoea with no clinical dehydration. Discharge the child ,but you should instruct the mother to give her child ORS alternatively with plain water.One cup ORS and one cup clean plain water,along with the normal diet as long as diarrhoea continues.

If the child has obvious signs of dehydration and he is refusing to take ORS,this may be because he is either:

1- Tired or weak to drink
2- Sleepy
3- Irritable

Observe the patient carefully. Do you think he is too tired or too weak to drink ? You know ,that the child who is conscious but too tired or too weak to drink may need to be rehydrated by a nasogastric tube. Well do not rush. Try to give ORS orally using a 5cc plastic syringe without the needle,or if you have a plastic dropper at hand it will do. Try to slide the dropper or syringe into the mouth to deliver ORS. Most children,dear doctor, will swallow reflexively and you may find that you do not need to refer him for nasogastric rehydration. Instruct the mother to use the syringe or the dropper. Make sure she can cope.It is not difficult.The mother can easily carry it out. If this fails then you have to refer the child for nasogastric therapy.

If the child is tired or weak,give ORS using a dropper or syringe without a needle. If this fails switch to nasogastric therapy.

If the child is falling asleep,this is a sign of decreased consciousness. Wake the child up and continue administering ORS. Stay with the mother for few minutes and encourage her to wake her child and give ORS. This needs some patience. If still the baby can not take ORS, if you can not wake him up, and if the mother is not cooperating and reluctant to carry out your instructions then you have to refer the child for nasogastric therapy. If you think that the child is passing into coma,then refer to the Intravenous rehydration unit.

THE MOTHER IS BEING INSTRUCTED BY THE NURSE
AS A DOCTOR YOU SHOULD REINFORCE THE NURSE'S INSTRUCTIONS

Now what about the **irritable child?** In this case use a plastic dropper to administer ORS. Give ORS slowly. If the child continues to be irritable,or if the mother does not cooperate,then you should refer to the nasogastric rehydration ward. If the mother has to travel,you should instruct her to continue giving ORS by the dropper until she reaches the nasogastric rehydration unit.

I would like to draw your attention that sometimes children who are two years or older **refuse ORS** inspite of being still dehydrated. They often clench their teeth. If this happens,use a plastic dropper.You should slip it between the child's clenched teeth and his cheek. He will reflexively swallow the oRS rather than spit it. Sit few minutes with the mother,direct her, and meanwhile continue observing the child. If still the child is refusing ORS,well you have to refer him for nasogastric therapy.

Giving ORS by the dropper.

A child being fed (ORS) by a syringe

During monitoring it was observed that the child was too tired.

One of the problems that will face you in the treatment of dehydrated children is vomiting. You should carefully observe the child. A child about to vomit will signal by puckering mouth movements. You should realise that most vomiting are 10-25 cc. So if the child is taking ORS continuously and say he took half a cup i-e 100 cc and vomited once, you should not worry. **Stop giving ORS for 5-10 minutes. Then give him ORS slowly.** If the child continues to vomit,continue to observe him. If he vomits five times or more in an hour,then you should consider referring the child for nasogastric therapy. Usually a nasogastric tube can deliver the oral solution and nearly always stops persistent vomiting.

Some children will be presenting with fever. Fever often accompanies diarrhoea. Also you should know that fever in turn increases dehydration. Examine carefully the child to find out the cause of fever. Advise the mother to remove the child's clothing and apply cold compresses. **Remember that air conditioning and fans help to cool the child's body.**

Let us now summarize the items to be monitored during the first cup of ORS. These are :

- o Position of the child
- o Rate of administeration of ORS
- o Acceptance of ORS
- o Vomiting
- o Fever.

INFORMATION SECTION 2

PRACTICE QUESTIONS

Check [✓] whether the following statements are false or true :

	False	True
1- Before the mother comes to the oral treatment area she should have received some instructions on how to give ORS	[ ]	[ ]
2- In the oral treatment area, monitoring of dehydrated children should be done twice	[ ]	[ ]
3- Ideally more than one physician should monitor the progress of the child	[ ]	[ ]
4- The mother should hold the child upright during ORS administeration	[ ]	[ ]
5- The rate of administering ORS is one teaspoonful every 5 seconds	[ ]	[ ]
6- At any moment the doctor can decide to refer the case to the discharge area even if the case was not initially rehydrated	[ ]	[ ]

Read carefully the following case histories and respond to the questions on each case.

- o Ali is two years old. He is suffering from moderate dehydration due to diarrhoea. He was irritable. His mother took him to the rehydration center. A full history was taken and correctly recorded. The physician in charge examined the child and wrote the management plan for the case. It included

giving oral rehydration fluid ad libitum.
Om Ali took her first cup from the dispensing area. Your assistant was responsible to carry out your plan. He noticed that Om Ali was holding her son upright , and is giving him one teaspoonful every minute. However, the child was refusing to take ORS. The physician started to take a full history and then he re-examined the child. He told the mother that the child must drink ORS. If he continued to refuse ORS he will be transferred to hospital to be rehydrated intravenously

7- Criticise the procedures carried out by the assistant.

8- Give possible reasons why the child refused ORS.

9- State what actions should the doctor carry out for this child .

o Om Fatma comes in the treatment area holding her first cup. She sits down on the bench with her legs crossed and the child lies on her lap-she starts giving ORS-

the child chokes. She stops for five minutes,holding the child upright then put him down again on her lap flat on his back, and starts giving him ORS by spoon. The child vomits again. The mother looks around.You go to her quickly.

10- What are the actions you should do?

o You are the physician on duty in the ORS treatment area in the rehydration center. You noticed a six months old child sleeping in his mother's arms and a half empty cup of ORS infront of her.

11- What should be your actions and decisions ?

INFORMATION SECTION 2

ANSWERS TO PRACTICE QUESTIONS

1- [✓] True

2- [✓] False monitoring should be done during first cup,after first hour then hourly until initial rehydration is accomplished.

3- [✓] False only one physician should monitor a child so that he can compare progress.

4- [✓] True,

5- [✓] False-it should be one teaspoonful evry minute.

6- [✓] False- every child should not leave the oral rehydration treatment area except if initially rehydrated or refereed for rehydration by another method.

7- The doctor should have read the history,the clinical findings and the management plan. He would not have frightened the mother.

8- The possible reasons for not accepting ORS are:

- Irritability of the child.
- The child's age. Some children who are two years or older may refuse ORS inspite of being dehydrated.
- Other possible reasons : the child may have been too tired to drink or he may be falling asleep.

9- This child is irritable. The physician should have used a plastic dropper to deliver the ORS. He should have shown the mother the technique. If the child is clenching his teeth he should slip it between the child's clenched teeth and cheek. If the child continues to be irritable and refusing ORS, then the doctor should decide to refer him for nasogastric therapy and not intravenous therapy.

10- The following actions should be made:

1- Show the mother how to hold her child correctly. Child should be in an upright position while taking ORS.

2- Explain to the mother that in this way her child will not choke or vomit.

3- Sit with the mother for few minutes to make sure that she understands the instructions given and follow them up.

4- Observe if the child will vomit or not. If he vomits again, instruct the mother to wait for few minutes then give ORS slowly.

5- Continue to observe the child. If still he is vomiting (five times or more in an hour) ,refer him to the nasogastric rehydration unit.

6- Go back to the dispensing station and check if the nurse is giving the correct instructions to the mother or not.

11- Examine the child to see if he is dehydrated or not. If child is now rehydrated, refer him to the discharging area .His mother should be educated to maintain hydration If still dehydrated try and wake him up. If you succeed continue giving him ORS. If you can not wake him up refer him to the diarrhoeal ward. He should be rehydrated by another method according to his clinical picture.

INFORMATION SECTION 3

MONITORING THE PROGRESS OF THE CHILD AFTER ONE HOUR HAS ELAPSED

Dear doctor

When one hour elapses, you should monitor the following:

Amount of ORS consumed
Clinical signs
Vomiting

A child who is mildly dehydrated will require for initial rehydration 50 mls per Kgm body weight for the first 4 hours. If he is moderately dehydrated he will need 100 mls per Kgm body weight of ORS for a period of 4-6 hours. You know that a dehydrated child is a thirsty child.He should drink ORS ad libitum i-e freely.

You will know the amount of ORS consumed from the tick marks or adhesive tape;and from the nurse in the dispensing area as well from the mother. The information must be consistent. Remember that you have to make allowance,if this has not been done ,for the amount that was split, as well for the amount lost due to vomiting. If there is a discrepancy,you have to discuss them with the nurse and find why. Correct the nurse if she did a mistake. Always remember that the doctor and the nurse are one team. They aim at better management.

After one hour has elapsed,you have to check the amount of ORS consumed.At the end of the first hour,the child should have consumed 300 cc. That is to say approximately one cup and a half. If more than two cups have been taken,this may denote a hypernatraemic case. The hypernatraimic child will often drink a large amount of fluid in a short time more than one might expect, but seldom vomits inspite of this rapid intake. In this case you should instruct the mother to give ORS more slowly.

A CHILD DEMANDING FOR MORE ORS

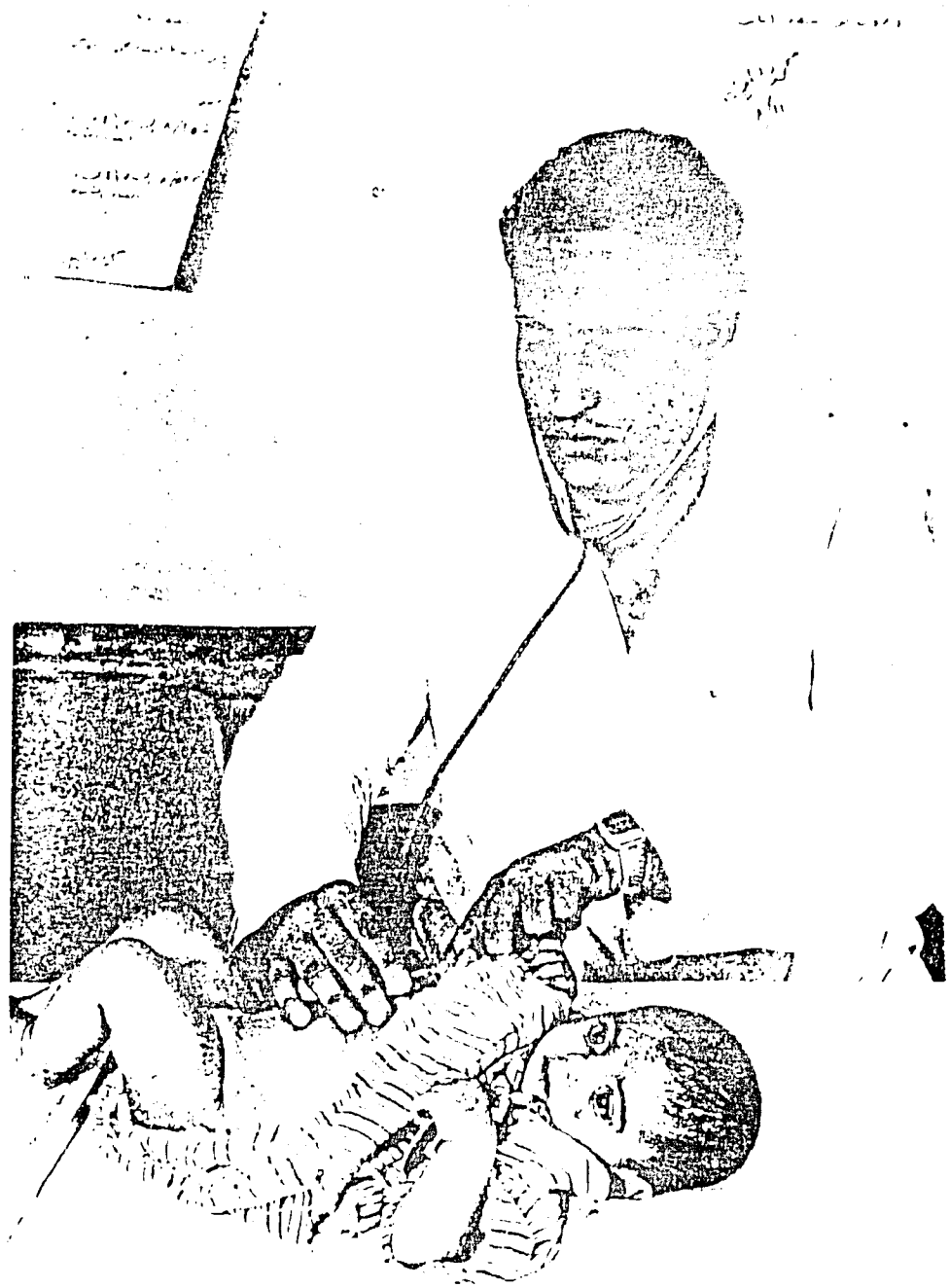
Examine the child carefully. If he had fever on admission, then check his temperature.If still he is running a fever and his temperature is not declining,examine the child carefully. You should suspect the presence of an infection. Make sure that there is no blood or mucous in the stools to rule out bacillary dysentery.

Observe the child's breathing ? Is it quiet? Is it rapid or rapid ,and deep ? If breathing is normal this is fine. If not,find out why. The child may be suffering from pneumonia, where breathing is rapid and shallow. The treatment given should be according to the specific infection detected. Remember that whatever antibiotic you will give,the child must be rehydrated.

Now check the signs of dehydration.Observe the child's condition. Is the child alert ? Is he irritable ? Look at his eyes. Are they still sunken ? Can you detect any improvement in this sign?

Do an abdominal skin pinch. Do you think that the skin elasticity has improved ? Inspect and palpate the child's extremities. Be sure that they are not cold or blue. If the patient is an infant inspect and palapate the fontanelle. Note if fontanelle is becoming less depressed or not. Also if the child cries and tears are noticed this is a good sign.

You should always inspect,palpate,percuss and auscultate the abdomen. If there was abdominal distension,ask yourself has there been any improvement or not ? If yes continue giving ORS at a rate of one teaspoonful every 2 minutes. However, if the child's condition did not improve,then you should examine the child carefully. Exclude respiratory distress,severe distension and ileus. If you suspect either,refer the case to a diarrhoeal ward.

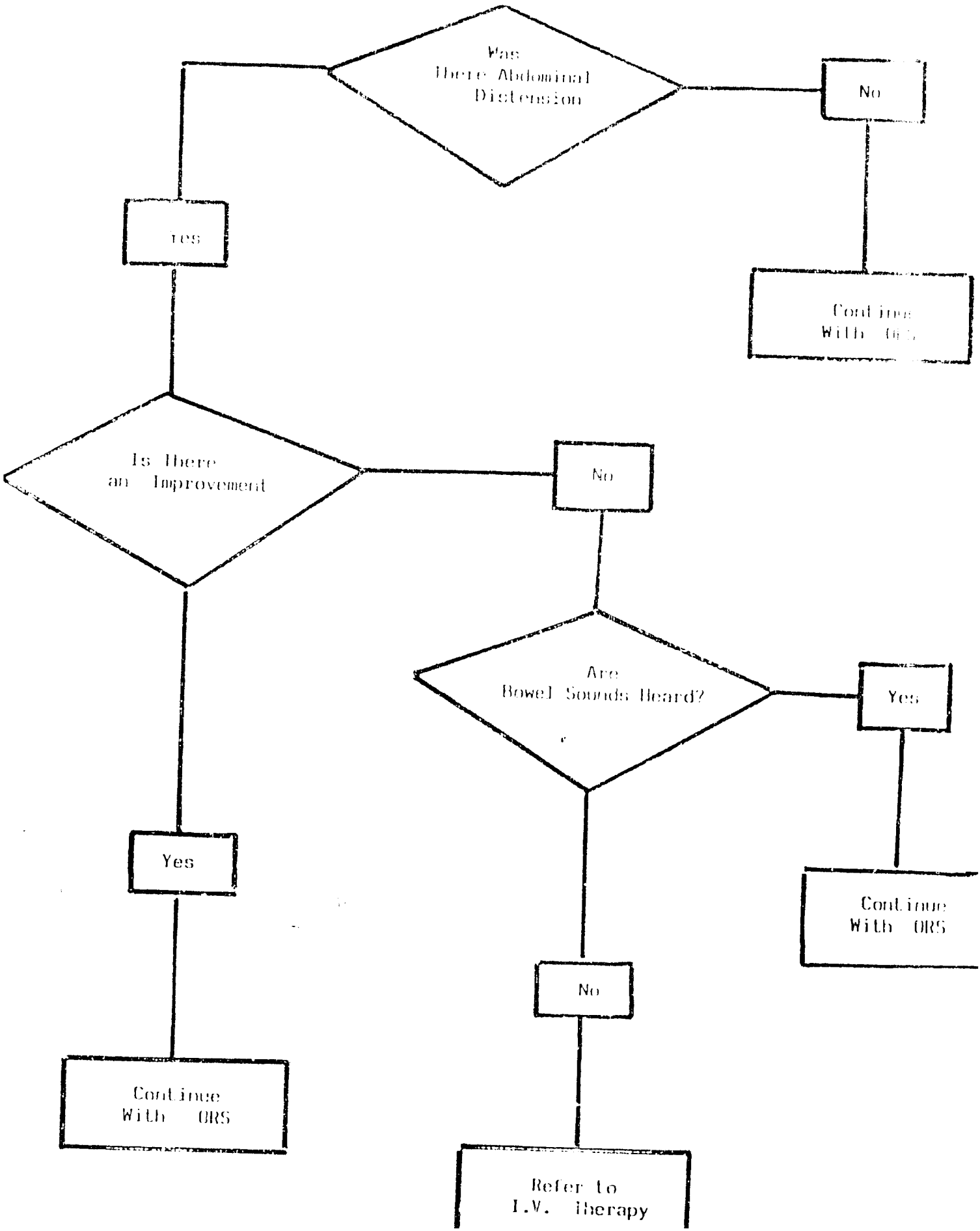


THE DOCTOR IS AUSCULTATING THE ABDOMEN

Now study the following decision tree

DECISION TREE

MANAGEMENT OF DIARRHEAL CASES
WITH ABDOMINAL DISTENTION



INFORMATION SECTION 3

PRACTICE QUESTIONS

1- List the items that should be monitored after one hour of oral rehydration has elapsed:

o

o

o

Read carefully the following situations then respond to the questions .

o You are the doctor in charge of the rehydration center. You observed a child who is still thirsty after one hour of oral rehydration. There was one tick mark on the mother's shoulder denoting that she took only one cup. The mother was holding a cup that was nearly empty. The mother told you that she has given the child one cup and this is the second. On further questioning the mother admitted filling the cup herself without waiting for the nurse.

2- What are the actions and decisons to be taken in this case?

o A child was admitted having a fever of 38.5° C. After one hour of rehydration still the temperature was 38.5°C

3- What are the actions and decisions to be taken?

- o A child was admitted into the oral treatment area with dehydration and abdominal distension. After one hour of rehydration you find that the abdomen is still distended.

4- What are the actions and decisions to be taken.

INFORMATION SECTION 3

ANSWERS TO PRACTICE QUESTIONS

1-

- o Amount of ORS consumed
- o Clinical signs
- o Vomiting

2-

- o This child is taking ORS at a higher rate than the average. Make sure that the child is not vomiting. If he did, advise the mother to slow down the rate of administration of ORS. If he did not vomit allow the mother to give plain water between ORS feeding.
- o Ask the mother to tell the nurse to refill the cup
- o Correct the tick mark on the mother's shoulder
- o Discuss with the nurse the importance of observing and recording the number of cups correctly.

3-

- o Examine the child carefully. He may be suffering from an infection. Check the presence of blood and mucus in stools to rule out bacillary dysentery. Observe the breathing and examine the chest to exclude respiratory infection.
- o Continue with rehydration but give the first dose of specific antibiotic according to the infection detected.

4-

- o Examine carefully and find out if the distension has improved or not. If it has improved continue giving ORS. If it did not you have to exclude ileus and respiratory distress. Refer to diarrhoea ward immediately if either is suspected.

INFORMATION SECTION 4

ITEMS TO BE MONITORED EVERY HOUR
UNTIL INITIAL REHYDRATION IS COMPLETED

Dear doctor

The following items should be monitored hourly:

- o General condition of the child (alert-irritable-coma-shock)
- o Breathing (quiet-rapid-rapid and deep)
- o Eyes (still sunken or became normal)
- o Fontanelle (still depressed or became normal
- o Skin elasticity (impaired or became normal)
- o Abdomen (distended or normal)
- o Extremities (colour- cold or warm)
- o Vomitus (amount and frequency)
- o ORS amount consumed

You have to examine the child every hour until rehydration is complete. This will take 4-6 hours. Remember that in all your monitoring activities you are comparing symptoms and signs previously recorded with what you are finding. You have always to decide if there is any improvement in these symptoms or not. If you find at any moment that there has been no improvement in the clinical signs, and the child is not really gaining weight — this means that more fluid is lost in the stools.

or vomitus than can be replaced orally. This child should be switched to nasogastric rehydration therapy.

If you find that the child has improved, be confident, congratulate the mother, and continue giving ORs. Remember that the return of tears is an encouraging sign that rehydration is progressing. Once you find that the child is fully rehydrated and the signs of dehydration disappeared, this means that the child is ready for discharge. Make sure that his mother was well trained in diarrhoea prevention and management before she leaves the center. Do not forget to weigh the child again and record the weight in the register book before discharging your patient. Remember that if the child has under weight this means that this child should receive nutritional therapy.

THE DOCTOR IS MONITORING THE PATIENT

Now you know that during your work in oral rehydration center you may have to decide to refer your patient to the diarrhoeal ward for either nasogastric or intravenous rehydration therapy.

Let us just consider referral for nasogastric rehydration. You should refer your patient for nasogastric rehydration if any of the following is encountered:

- o Vomiting continued (5 times or more in an hour)
- o Child is too weak or too tired to drink or sleepy.
- o Increasing dehydration inspite of oral renydration
- o Mother is tired,sleepy or unwilling to cooperate

Now when should you consider intravenous therapy? You should refer your patient for intravenous therapy if the child has any of the following conditions:

- o Shock
- o Comatose,unconscious cases
- o Severe abdominal distension
- o Ileus
- o Increasing dehydration and child is starting to go into severe dehydration

Dear doctor

You realise that if your center is affliated to a hospital ,there will be no problem in the transportation of your patient. It can be done quickly and no time is lost. However, if your center is not a hospital based center you will be faced with the problem of transportation. Remember

that all cases in need of intravenous rehydration should be regarded as emergency cases. Refer your case immediately and with the most quick way of transportation as an ambulance, a car or whatever means of transportation at your disposal or that of the family. This is important as you may loose the patient.

If the child is in need of nasogastric rehydration, instruct the mother to continue giving ORS with the dropper until she reaches the diarrhoea ward.

Before closing this section, you should realise by now that the team work is essential. Your work has to be coordinated with other physicians, nurses, and with mothers. Your ability to communicate verbally and or in writing with all those concerned is an essential feature of good clinical management. It can help in reaching correct decisions and saves lives.

INFORMATION SECTION 4

PRACTICE QUESTIONS

1- List the items to be monitored hourly.

o
o
o
o
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o
o
o

Read carefully the following case histories and respond to the questions on each case .

o A child was admitted to the treatment area of the oral rehydration center.He was moderately dehydrated. After 3 hours,you observed that the child has improved. His eyes became normal,the fontanelle is no longer depressed ,skin elasticity returned back. The child however, is still thirsty.

2- The action to be done is to:

[ ] a- Discharge the case
[ ] b- Continue giving ORS

3- State why ?

o A child is being rehydrated in the oral rehydration treatment area. The child is not improving after two hours of being rehydrated. The doctor noticed that the child is vomiting. The mother tells him that the child has vomited 6 times in the last hour.

4- The actions to be done is to:

[ ] a- Continue giving ORS
[ ] b- Refer for nasogastric therapy
[ ] c- Refer for intravenous therapy

5- State why?

- o A child is being rehydrated in the oral treatment area. The child's abdomen is being distended. After three hours you noticed that the distension is increasing. You examined the child, no bowel sounds were heard

6- The actions to be done is to

[ ] a- Continue giving ORS
[ ] b- Refer for nasogastric therapy
[ ] c- Refer for intravenous therapy

7- State why

Pick the wrong statement

8- Indications for nasogastric therapy are:

[ ] a- vomiting continued 5 times or more per hour
[ ] b- shock,unconscious cases, comatose
[ ] c- child is too weak or too tired to drink
[ ] d- mother is tired-sleepy or unwilling to cooperate

9- Indications for intravenous therapy are:

[ ] a- Ileus,severe abdominal distension
[ ] b- Shock,unconscious cases,comatose
[ ] c- Vomiting continued 5 times or more per hour

INFORMATION SECTION 4

ANSWERS TO PRACTICE QUESTIONS

1-

- o General condition
- o Breathing
- o Eyes
- o Fontanelle
- o Skin elasticity
- o Abdomen
- o Extremities
- o Vomitus
- o Amount of ORS consumed

2-

[✓] b-Continue giving ORS

3-Why ?
This child is still dehydrated as he is still thirsty. Continue giving ORS until all manifestations disappear.

4-
[✓] b- Refer for nasogastric therapy.

5- Why?
The condition of the child is not improving and he is vomiting six times in an hour

6- [✓] c- Refer for intravenous therapy

7-Why ?
This is an emergency- The child is sufferin

8-
[✓] b-

9-
[✓] c-

SUMMARY

Dear doctor

You have been exposed to this unit on Monitoring The Progress Of The Diarrhoeal Cases During Initial Rehydration. You have learned all about the setting in which you will be working.

You understand now that you should monitor the progress of the child during initial rehydration. During the first cup you have to observe the position of the child, rate of administeration of ORS , acceptance of ORS, vomiting,and fever. After one hour has elapsed,you should monitor the amount of ORS consumed,clinical signs and vomiting. These items should also be monitored hourly.

You understand the reasons for refusing ORS and how to act accordingly. You learned how to deal with a child who is vomiting, a child with fever,a sleepy child,or a tired child.

You realise now that you should switch to nasogastric rehydration if vomiting continued "5 times or more in an hour ", if the child is too weak,or too tired to drink,or being sleepy. You also should switch to nasogastric if there is increasing dehydration inspite of oral rehydration. If you find that the mother is too tired ,sleepy or unwilling to cooperate you should also refer the case for nasogastric therapy.

Sometimes you have to refer the case for intravenous therapy. This is indicated in case of shock,coma ,severe abdominal distension and ileus. In case of increasing dehydration and you suspect that the child is starting to go into severe dehydration ,you have also to refer the case for intravenous therapy.

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