



# Project-based Learning

J.S. Lloyd, MD, FAAP

16 March, 2010



# INTRODUCTION

Instructional Case Study

Patient Case Review

Problem-based learning

Case Discussion

**Project-based learning**

# Project based learning

- Provides unique educational opportunity:
- “Translational learning”:
  - ✓ clinical → academic
  - ✓ patient → classroom

# Project based learning

## Self-directed learning(S4):

- Research intensive
- Assimilate and organize large amounts of material
- Learn concepts of "evidence based medicine"



# Evidence-based medicine

Describes an approach to decision making about a clinical problem which is based on up-to-date scientific research.

# Various formats

- ✓ Develop a patient care protocol
- ✓ Design a research project
- ✓ Research and present a “best practice”
- ✓ Prepare Grand Rounds



# Patient care protocol

-example-

Management of  
jaundice in newborn

-Best practice-

“Local solutions”



# “Best practice”

A clinical approach to a problem which is based on scientific evaluation and demonstrates success in the context of the social, economic and medical community.

# Design a research project -example-

- Hospital based

  - Inpatient wards

  - Outpatient clinics

- Community based

  - Health surveillance , e.g.  
vaccinations

  - Health care access

Objective: explore ideas

# Grand Rounds Format -in brief-

## Typical content:

- ✓ History, physical, clinical presentation
- ✓ Laboratory and radiologic data
- ✓ Diagnostic studies
- ✓ Interventions
- ✓ Clinical course
- ✓ Final outcome/resolution
- ✓ Didactic lecture about final diagnosis

# Format

- Historically: patient on stage
- Today, in general:
  - Didactic
  - Multi-media; slides, videos
  - Informative
  - Interaction encouraged following presentation

**Valuable educational tool for resident**



Recall, our case based review

Resident missed the diagnosis  
of  
esophageal atresia

# Recall, our case based review

- Remember the lessons learned by resident
  - Importance history
  - Importance of symptoms
  - Develop, re-work your “working diagnosis”
  - Do not behave simply as a “pattern recognizer”



# Assignment: grand rounds presentation

Turn missed diagnosis into educational opportunity:

- Student becomes “expert” on diagnosis
- Develops “S4” skills



# Project based learning: valuable lessons

- ✓ Active, engaged learning
- ✓ Acquire in-depth knowledge
- ✓ Sense of accomplishment
- ✓ Increased confidence to remain open to learning from patients



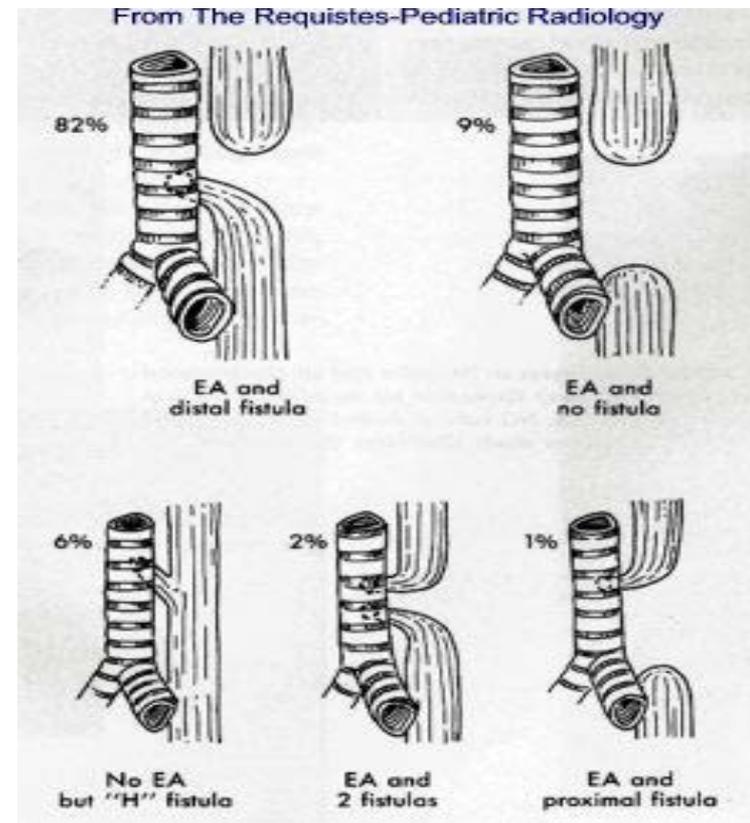
# 3 – clinical slides

# Tracheoesophageal fistula

Most common



Less common



What do you see ?



2 findings..

