Case Presentation and Discussion on Acute Abdomen in an Infant

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General Data:

J.O., 8-month-old, female, from Tondo, Manila

Chief Complaint:

“abdominal distention”

History of the Present Illness:

1 day PTA → gradual abdominal distention

vomiting, bilous

watery, mucoid, non-blood streaked stool

Few hours PTA → persistent vomiting

abdominal distention

fever

Consult OMMC

Pedia ER

CBC done – HgB 10.2
Hct 0.30
WBC 6.2
pmn 0.40
lymph 0.52
mono 0.06

Sodium – 138.7mmol/L

Potassium - 6.33mmol/L

CXR PA/L – Clear Lungs
Elevated diaphragm
Distended intestines

Referred to Surgery Department

Review of Systems:

unremarkable

Past Medical History:

no previous hospitalization

Family History:

denies any heredofamilial disease

Maternal History

born to a 42y/o G7P7, term via NSD

Physical Examination:

> awake, irritable, well-nourished

> PR=146bpm RR=46cpm, Temp=38.0^{o}C
Wt=7.5Kg

> normocephalic

> pink palpebral conjunctivae,
anicteric sclerae, no naso-aural discharge

> supple neck, no cervical
lymphadenopathy

Physical Examination:

> symmetrical chest expansion,
clear breath sounds

> adynamic precordium, no murmur

> NGT output – fecaloid character

> globular abdomen, normoactive bowel sounds, distended, tympanitic,

> Digital Rectal Exam: good sphincteric tone, empty and collapsed rectal vault,
no stool nor blood on examining finger, clear mucoid discharge

> Bilaterally descended testis

> grossly normal extremities with full and equal pulses, no vertebral deformity

Salient Features

8-month-old, female, well nourished

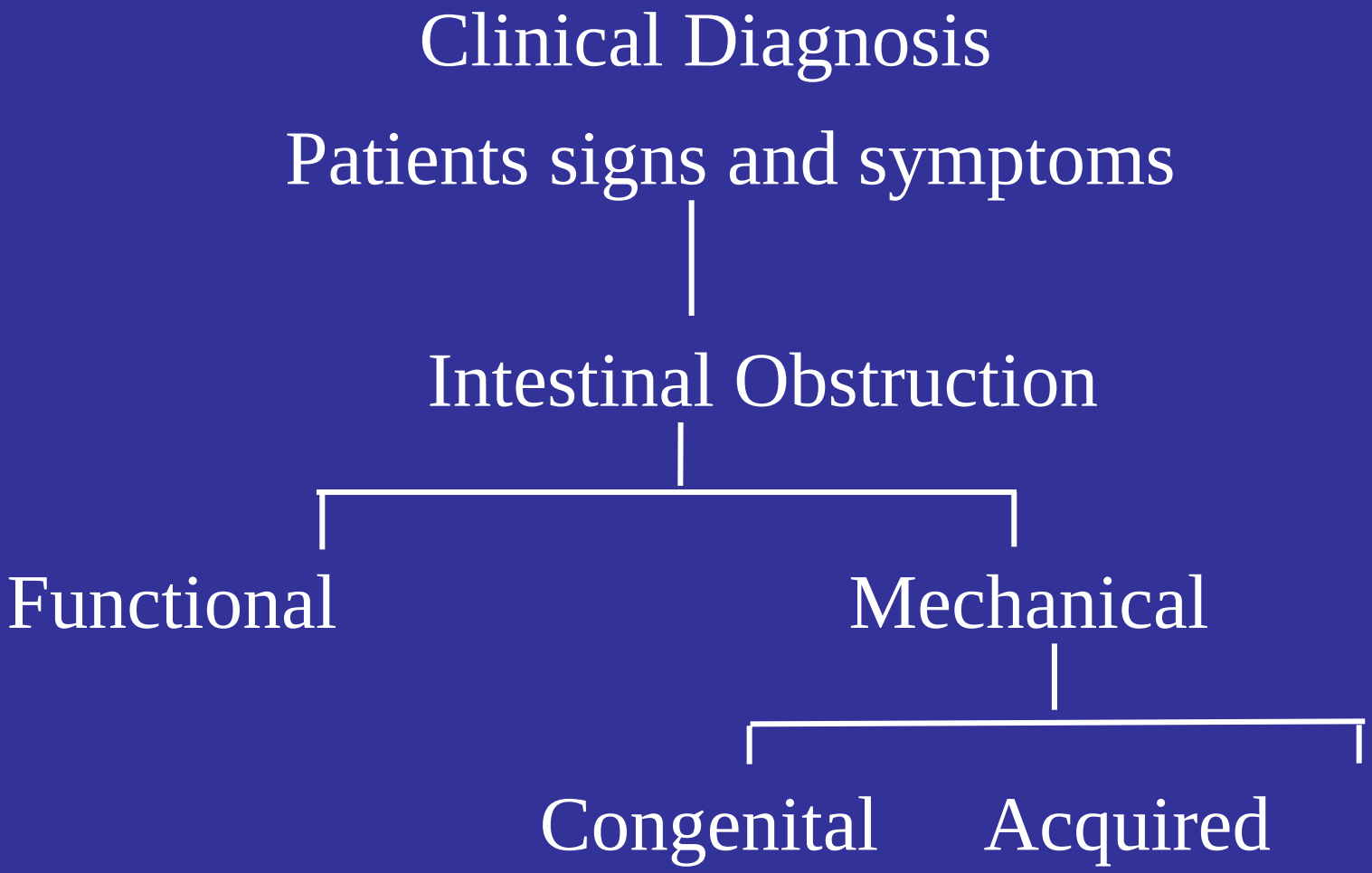
abdominal distention

vomiting

fecaloid NGT output

globular abdomen, normooactive bowel sounds, distended, tympanitic

empty, collapsed rectal vault, mucoid discharge


Clinical Diagnosis
Patients signs and symptoms
Intestinal Obstruction
Functional
Mechanical
Congenital
Acquired

Clinical Diagnosis

Clinical Diagnosis	Certainty	Treatment Modality
Acquired	80%	Operative
Congenital	20%	Operative

Paraclinial Diagnostic Procedure

Signs and symptoms present in the patient points to an Acute Surgical abdomen secondary to Mechanical Obstruction.

No need to do additional paraclinical diagnostic procedures.

TREATMENT

Pre –op Diagnosis

MECHANICAL OBSTRUCTION

Goals of treatment

- Relieve the Obstruction/ Decompress the abdomen
- Remove the cause of obstruction
- Restore continuity and function of the bowel

Treatment Options:

Procedure	Benefit	Risk	Cost	Availability
Surgery Laparotomy	➢90% relief of obstruction (Complete and partial) ➢Actual visualization & removal of the cause	Exposure to anaesthesia Intra-abdominal contamination Anastomotic leak	P 5000	Available

Treatment Options:

Procedure	Benefit	Risk	Cost	Availability
Non-Surgical Decompression	➢ treatment of choice in patients with partial bowel obstruction ➢ 17-25% relief for complete obstruction ➢ 20-30% recurrence	Bowel strangulation	P 500	Available

Surgical Treatment:

A. Pre-op Preparation
    - **Informed consent**
    - **Psychosocial support**
    - **Optimize patient's health**

At the ER:

- NPO
- IVF D5 0.3NaCl 500mL to run at 100µgtts/min
  vol/vol replacement for succeeding fluid losses with PLR
- IV antibiotics started
  - Ampicillin 175mg TIV q6
  - Gentamicin 40mg TIV OD
  - Metronidazole 100mg TIV q8
- For “E” operation, Exploratory Laparotomy

B. Intra-operatively

- Patient placed supine
- Area prepared, Asepsis and antisepsis technique
- Sterile drapes placed
- Incision done

  Right Upper Quadrant Transverse incision

Intra-operative Findings:

> about 300cc of ascitic fluid

> entire small bowel is dilated

> colon is collapsed from the ileo- cecal area

> cystic mass is noted at the distal ileum about 5 x 5cms, obstructing the ileocecal area

Intra-operative Findings

ileum

cystic mass

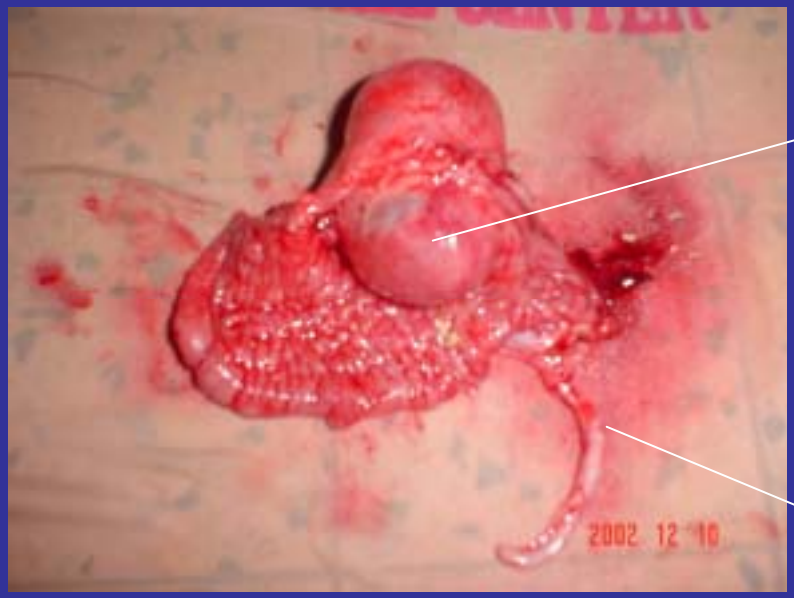
cecum

ascending colon

vermiform appendix

Intra-operative Findings

Distal ileum opened:



cystic mass with intestine-like wall within mesenteric border of ileum

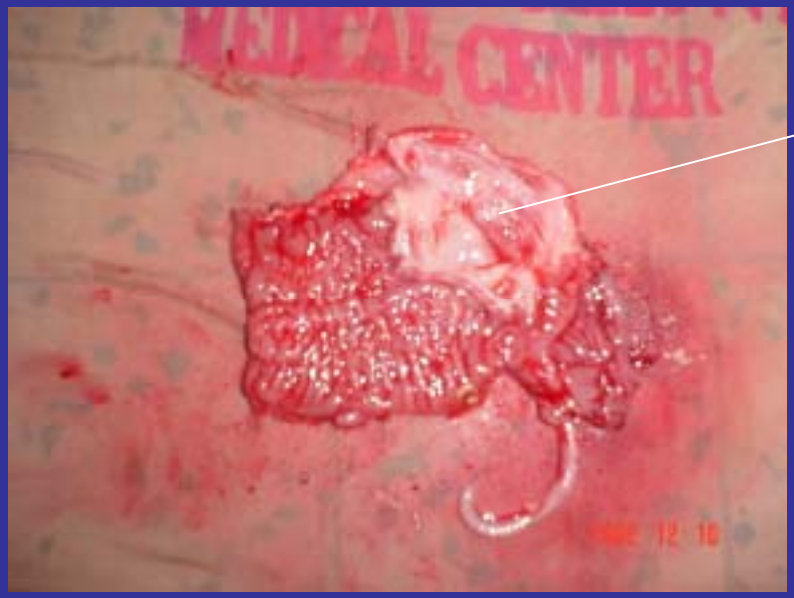
appendix

Intra-operative Findings

Cystic mass opened containing clear fluid

cystic mass with mucosal lining

Intra-operative Findings



cystic mass with thick mucosal lining

Surgical Treatment (Intra Op)

Treatment Options

Procedure	Benefit	Risk	Cost	Availability
Right Hemicolectomy	Relief of obstruction 75% preservation of bowel function	Anastomotic leak Post Op diarrhea	6000	Available
Segmental Resection with Primary anastomosis	Relief of obstruction 90% preservation of bowel function	Anastomotic leak	5000	Available
Ileostomy	Relief of Obstruction	Fistula 5% Prolapse 2-16% Mortality 3%	3000	Available

- Segmental Resection and primary anastomosis of distal ileum and ascending colon
- Peritoneal lavage
- Hemostasis
- Correct sponge count
- Layer by layer closure

Post-operative Diagnosis

Mechanical Obstruction secondary to Intestinal Duplication, distal Ileum

Intestinal Duplication:

- Rare congenital malformation
- Most commonly located in the ileum (50%)
- Cystic or tubular
- 3 major characteristics
  - Contiguous and adherent to some part of the alimentary tract
  - Has a smooth muscle coat
  - Lined with mucosa or epithelium similar to that of the stomach, small intestine, or colon

Intestinal Duplication:

- Signs and symptoms
  - abdominal pain
  - melena, hematemesis
  - abdominal mass palpated 50% of infants
  - vomiting
  - abdominal distention
  - peritonitis
- Laparotomy is usually the only definitive method for diagnosis
- 60% diagnosed by 6 months
- 80% within the first two years of life

Intestinal Duplication:

- Treatment
  - Simple resection followed by a primary anastomosis

Post-operative Care

- Sufficient analgesia
- Nutrition by parenteral route while NPO
- Continue IV Antibiotics
- Wound care
- Monitoring of complications and treat as indicated

5th Post-op Day

- Started Oral feeding
  - Glucose water

6th Post-op Day:

  - ORS feeding

8th Post-op Day:

  - Milk formula half strength started
  - PPN discontinued

9th Post-op Day:

  - Milk formula full strength

11th Post-op Day:

  - IV fluid consumed

12th Post-op Day

- Patient sent home

Thank You.