INTRODUCTION:
Meconium peritonitis: sterile inflammatory reaction in the fetal abdomen resulting from in-utero bowel perforation, usually involves the small bowel.
- Incidence: 1 out of 30,000 live births
- In-utero bowel perforation is consequent to congenital intestinal obstruction.
- Causes of obstruction include meconium ileus, bowel atresia, stenosis, internal hernia, neonatal Hirschprung’s disease, or volvulus.
- Prenatal diagnosis is suspected upon detection of:
  ✓ Fetal intra-abdominal calcifications
  ✓ Fetal bowel dilatation
  ✓ Fetal ascites and associated polyhydramnios
  ✓ On rare occasion, only an hyper-echoic area persists or meconium pseudocyst can be the only remnant.

CASE 1:
• Primigravida at 20 weeks’ gestation
Ultrasound findings:
• Moderate fetal ascites, dilated bowel loops (Fig.1A) & meconium pseudocyst (Fig.1B)
F/U serial ultrasounds: Bowel diameter up to 26 mm, evolving meconium pseudocyst
Emergency LSCS at 37 weeks in view of thick meconium stained liquor in labor
Post delivery:
✓ Exploratory laparotomy on postnatal day 2
✓ Per-op findings: grossly dilated duodenum, atresia of jejunum 3cm distal to D-J junction
✓ End-to-side duodeno-jejunostomy performed
✓ Baby developed sepsis and re-laparotomy done for suspected leak
✓ Expired on post-natal day 28

CASE 2:
• G3A2 at 25 weeks’ gestation
• Ultrasound findings: Dilated bowel loops (Fig.1A), intra-abdominal dense calcification (Fig.1B) (? remnant of healed bowel perforation)
• Amniocentesis: normal karyotype
• Follow-up serial ultrasounds: bowel diameter up to 18 mm, areas of intra-abdominal calcification, but no ascites or pseudocyst.
• Induction of labour at 38 weeks’ gestation
Post delivery:
✓ Baby kept NPO for 24 hours, passed stool on day 1
✓ X-ray: some areas of intra-abdominal calcification
✓ No features of obstruction on USG
✓ Healthy baby discharged on postnatal day 6

DISCUSSION:
Any condition causing bowel obstruction → bowel distension → local vascular impairment and necrosis → perforation → sterile chemical peritonitis
- Prenatal investigation:
  ✓ Fetal blood sampling: detect chromosomal abn.
  ✓ DNA analysis: rule out cystic fibrosis
  ✓ Fetal hematological and immunological investigation: exclude congenital infection
- Prognostic factors: amount of fetal ascites, bowel dilatation and evolution of meconium pseudocyst.
- Role of imaging: not only in establishing a diagnosis; rather, it has a vital role in prognosis too.
- Neonatal outcomes improved owing to better antenatal diagnosis advances in pediatric surgery