XVIII. Diseases of Liver, G. Bladder, Pancreas & Peritoneum

Peritoneum

N.B.3:

Localized peritonitis:

- ***A collection of pus is formed at one spot only of the peritoneum.***

The causes:

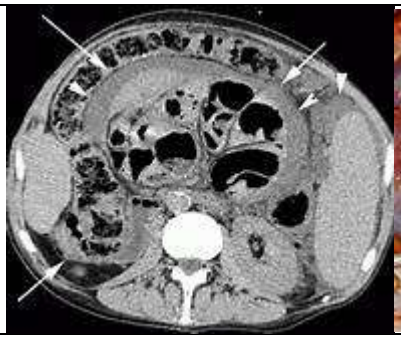
- ***Nearly similar to those of diffuse peritonitis provided the infection, within a certain time, is shut off from (prevented from spreading into) the general peritoneal cavity.***
- ***This is attained at by the formation of adhesions between the adjacent coils of intestines, other viscera and omentum.***

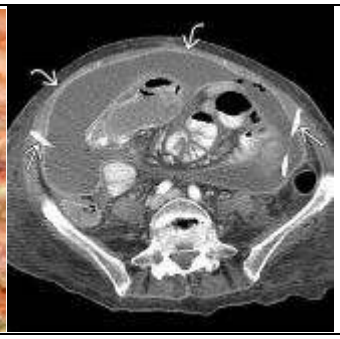
- ***Suppuration is frequent → intra-peritoneal abscess in certain sites or anatomical folds (cul-de-sac):***

1. ***Peri-appendicular abscess.***
2. ***Sub-diaphragmatic or sub-phrenic abscess:***
   - ***A localized collection of pus beneath the diaphragm; the right side (superior or inferior to the lives) is more frequently affected usually secondary to an acute intra-abdominal inflammation but occasionally following a distant (or a thoracic) lesion.***

Common causes of peritonitis.

Severity	Cause	Mortality Rate
Mild	Appendicitis Perforated gastroduodenal ulcers Acute salpingitis	<10%
Moderate	Diverticulitis (localized perforations) Nonvascular small bowel perforation Gangrenous cholecystitis	<20%
Severe	Large bowel perforations Ischemic small bowel injuries Acute necrotizing pancreatitis Postoperative complications	20-80%





Causes:

(a) Perforating gastric ulcer (→ left-sided abscess) or duodenal ulcer → right-sided abscess); common.

(b) Appendicular abscess.

(c) Cholecystitis.

(d) Liver-abscess and hydatid disease of the liver.

(e) Empyema and lung-suppuration.

(f) Suppurations of colon, kidney, pelvic organs, vertebrae or ribs.

Routes of infection:

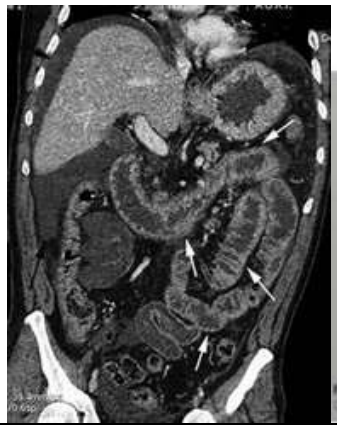
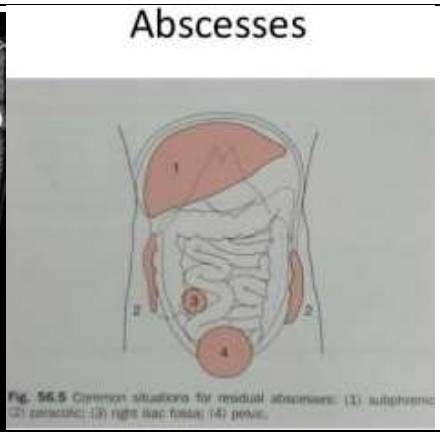
(a) Direct:

i. Introduced from outside.

ii. Extending from liver and other adjacent organs.

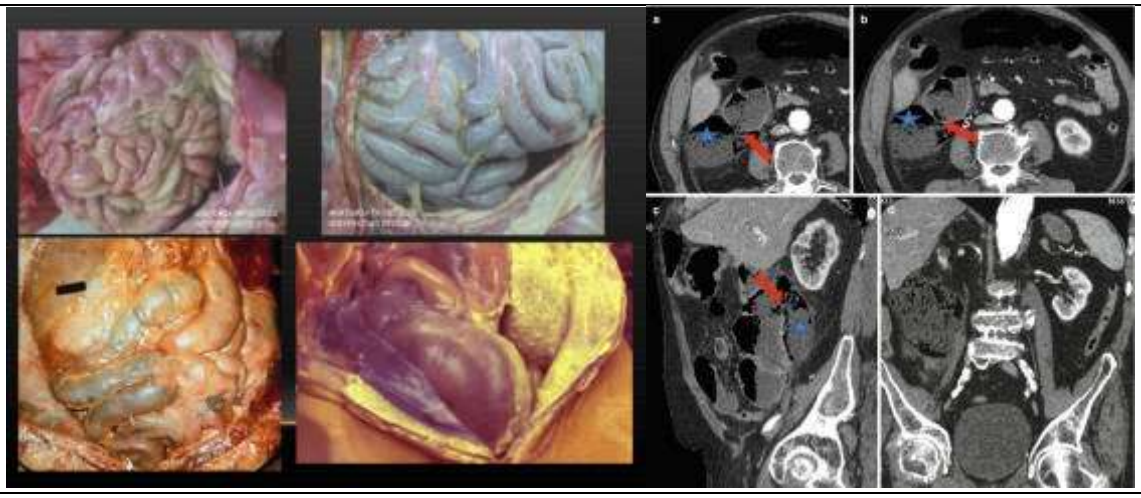
(b) Lymphatics (retro-peritoneal).

(c) Blood vessels.

Gross features:

- ***An abscess, the wall of which is either thick or thin and is formed of fibrin + fibrous tissue in addition to the closely-adherent surface of the diaphragm, liver or other adjacent organ.***
- ***The inner surface (lining) is ragged and covered by a friable fibrino-purulent material.***
- ***The purulent contents may show occasional gas (from a hollow viscus or bacterial decomposition).***

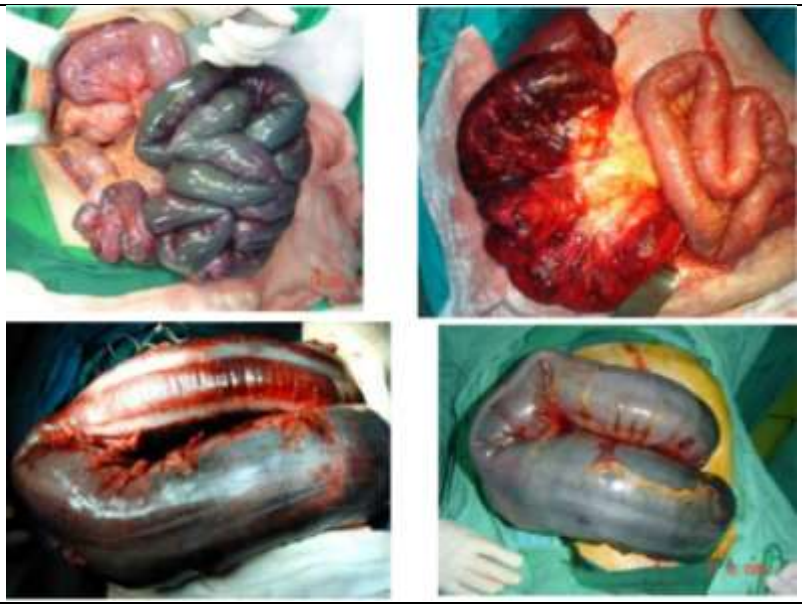


Clinically:

- ***Moderate pain and tenderness,***
- ***Cough and***
- ***Hectic fever,***
- ***Diminished respiratory movements,***
- ***Crepitation's and***
- ***Displacement upwards of diaphragm at the affected side.***

Complications:

- ***Pleurisy, pleural effusion, empyema, pneumonia, pneumothorax, pulmonary abscess, bronchial fistula, mediastinal abscess, pericarditis, perforation to the outside or into the intestine and generalized peritonitis.***



3. Pelvic abscess: Is caused by:

(a) Inflammation of uterine tubes (salpingitis).

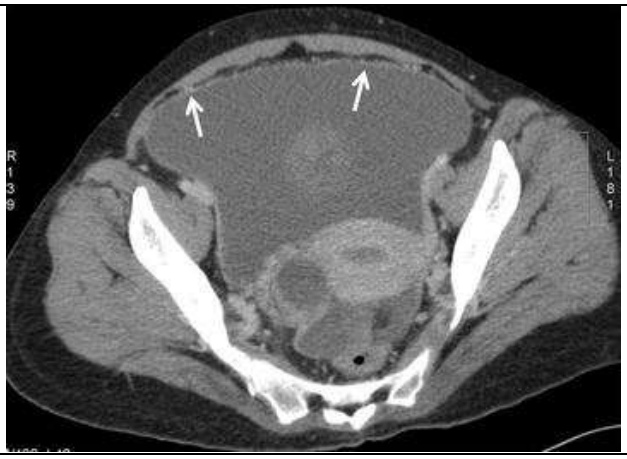
(b) Sepsis following abortion or labour.

(c) Acute appendicitis and inflammation of pelvic organs.

PATHS OF PERITONEAL INFECTION

Paths to peritoneal infection

- Gastrointestinal perforation, e.g. perforated ulcer, appendix, diverticulum
- Transmural translocation (no perforation), e.g. pancreatitis, ischaemic bowel, **primary bacterial peritonitis**
- Exogenous contamination, e.g. drains, open surgery, trauma, **peritoneal dialysis**
- Female genital tract infection, e.g. pelvic inflammatory disease
- Haematogenous spread (rare), e.g. septicaemia



Features:

- ***A tender mass associated with a thick oedematous mucous membrane of rectum or/and vagina) and a mucous discharge from the rectum (or/and vagina) as well as frequency of micturition, constipation and fever.***

Complications:

(a) Bursting of the abscess into rectum, vagina or bladder.
(b) Generalized peritonitis.

N.B. 4 Tuberculous peritonitis

- ***It occurs at any age but mostly in children and young adults with predominance of males (in autopsy statistics) or females (in surgical statistics).***

1. Acute tuberculous peritonitis:

- ***Is a part of general miliary tuberculosis but sometimes it results from rupture of a tuberculous mesenteric lymph node.***

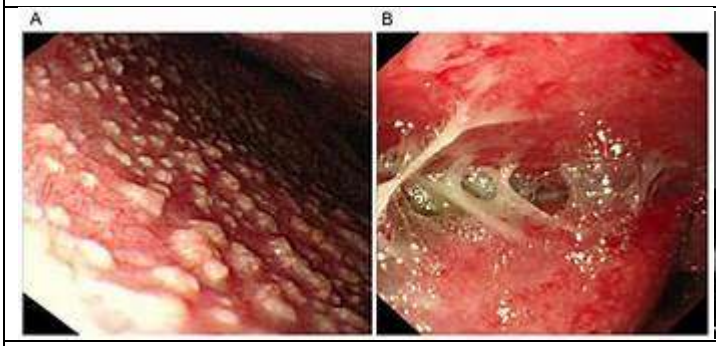
The peritoneum shows:

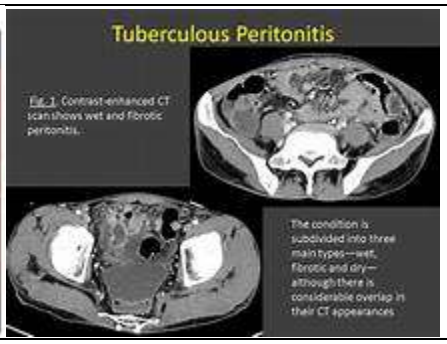
1. ***Yellowish-opaque spots and tubercles.***
2. ***An effusion of a clear fluid.***
3. ***An exudate; this, may form a thick layer of fibrin which is clear, turbid or haemorrhagic.***

Other organs (such as spleen and kidneys) may show tubercles.
***Cause of death:* Tuberculous meningitis.**

2. Chronic tuberculous peritonitis:

- ***Is usually secondary to some tuberculous focus elsewhere such as tabes mesenterica and tuberculous salpingitis or extra-abdominal tuberculosis such as from the lung or pleura (by way of lymphatics) or from bones, joints and bronchial lymph nodes (by way of blood stream).***





Varieties:

1. Ascetic (moist form):

- ***Is the commonest and is characterized by:***

(a) Marked effusion in the peritoneal cavity.
  - ***a. The fluid is thin,***
  - ***b. Yellow,***
  - ***c. With no (or very little) fibrin,***
  - ***d. Some R.B.Cs. And lymphocytes;***
  - ***e. Specific gravity is 1.019-1.026;***
  - ***f. Albumin-content is 47 %***

(b) Thickening of peritoneum which shows scattered fine tubercles: omentum is thick and infiltrated.
(c) Enlargement and caseation of mesenteric lymph nodes.
(d) Thickening of walls of the affected organs.
(e) Gradual distension of abdomen.
(f) Thin, tense and shiny skin and prominent dilated veins of anterior abdominal wall.

Adhesive (dry form):

a. With marked fibrosis.
b. No (or little) effusion.
c. Dense inflammatory exudate with numerous dense adhesions and formation of tuberculous granulation tissue → matting of viscera.
d. Adherence together of the loops of small intestine the surface of which is studded with tubercles (which may be hidden by the exudate).
e. Thickening and contraction of the omentum and shrinkage of mesentery.
f. Adhesions between loops of intestine and abdominal wall + caseation → ulceration of skin-surface → faecal fistula (internal or external).
g. Intestinal obstruction as a complication.
h. Clinical features such as wasting, constipation and abdominal pain.