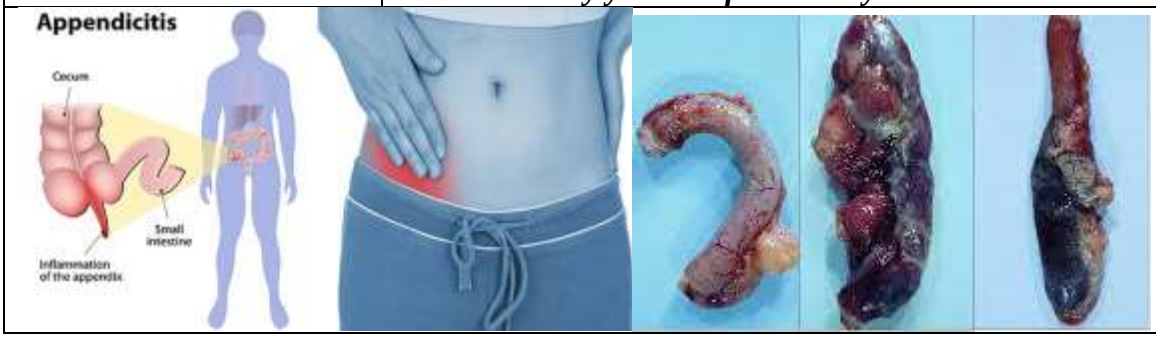
Appendicitis

Acute Suppurative Appendicitis | III- 5. 314

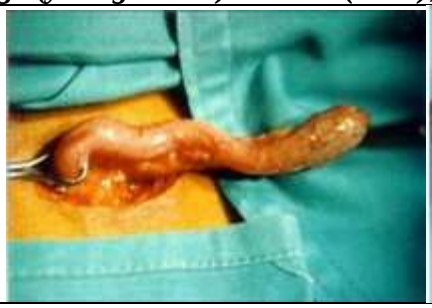
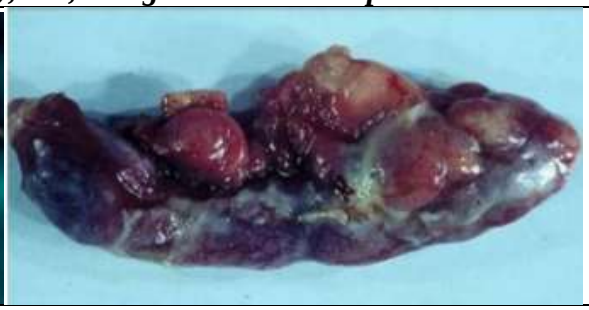
Vermiform appendix:		• ***Is enlarged*** ○ ***(swelling → rounding off of external angulations)*** • ***Inflamed, firm and rigid***
Peritoneal surface:		• ***Congested with dull areas*** • ***Injected engorged vessels (prominent)*** • ***Small haemorrhages (red)*** • ***Spots of suppuration (dirty yellow)*** • ***Some fibrinous network (dull; granular)***
	Mucosa:	• ***Swollen and thickened*** • ***Congested and granular*** • ***Scattered erosions***
	Lumen:	• ***Slightly dilated (in parts)*** • ***Filled with mucopurulent material*** • ***Shows an impacted concretion (fecoliths)***
	Distal part:	• ***Distended except at tip*** • ***Thin-walled*** • ***Greenish-black small patches*** • ***Shows gangrene starting at tip***
Meso-appendix:		• ***Swollen and thick*** • ***Red (in areas), dull grey (in other areas)*** • ***Shows dirty yellow inflammatory exudate***



N.B.I:

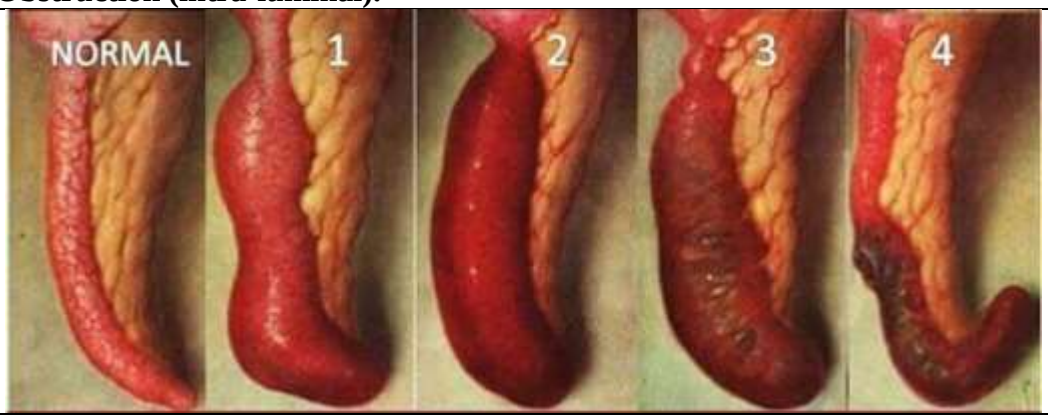
Predisposing factors for appendicitis

1. ***Increase in the lymphoid tissue in the wall of the appendix.***
2. ***Nervous strain and modern dietetic habits.***
3. ***Age (young adults) and sex (male); but, no age or sex is exempt.***

Exciting causes for appendicitis

1. **Infection (B. coli, haemolytic streptococci, enterococci etc.).**
2. **Obstruction (intra-luminal).**



Fate of appendicitis:

1. ***Resolution (partial or complete).***
2. **Fibrosis.**
3. ***Chronicity with recurrent attacks.***

***Complications*:**

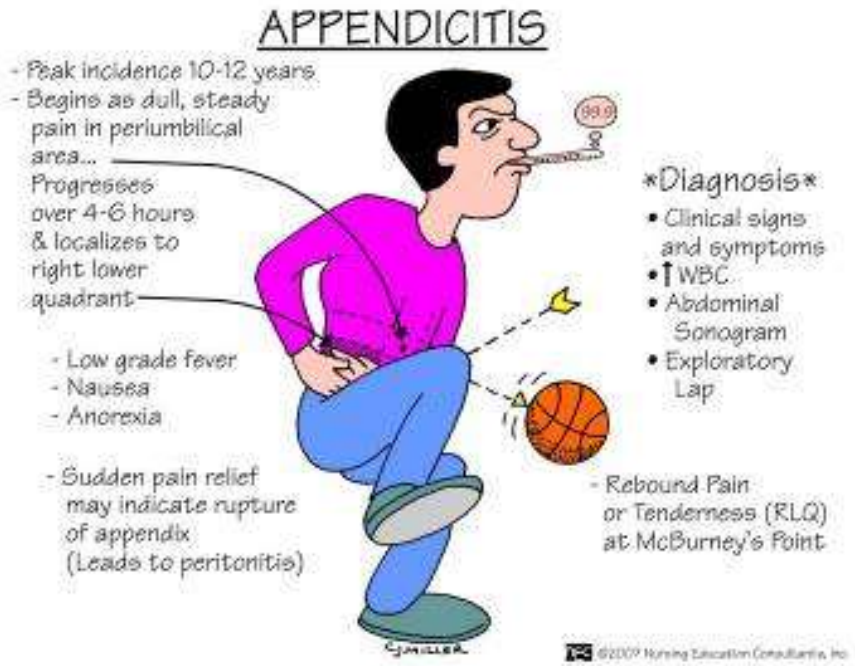
1. ***Spread of infection and perforation: Localized or diffuse peritonitis.***
2. ***Appendicular abscess; empyema of appendix.***
3. ***Mucocele of the appendix; cyst-formation.***
4. ***Faecal fistula.***
5. ***Intestinal obstruction.***
6. ***Thrombophlebitis (pylephlebitis) and formation of septic emboli → portal pyaemia as well as septicemia.***
7. ***Acting as a septic focus in the body*.**

N.B.2:

Symptoms and signs are characteristic:

1. ***Peri-umbilical pain which localizes in right iliac fossa to be diffuse if peritonitis ensues,***

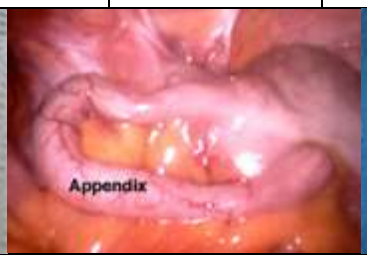
2. ***Nausea,***
3. ***Vomiting,***
4. ***Feverish state,***
5. ***Abdominal tenderness "McBurney's point",***
6. ***Rebound (when you release the pressure exerted on the right inguinal fossa the abdomen is painful)***
7. ***Rovsing sign (press on left side initiate pain on the right side)***
8. ***Leukocytosis and***
9. ***Picture of acute abdomen.***

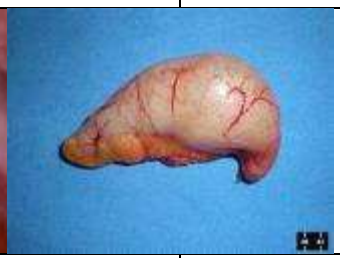


Nevertheless, the condition has to be differentiated from other causes of acute abdomen as well as conditions such as

1. ***Regional enteritis,***
2. ***Acute salpingitis,***
3. ***Intraperitoneal haemorrhage,***
4. ***Mesenteric lymphadenitis,***
5. ***Meckel's diverticulitis etc.).***

Chronic Appendicitis





Vermiform appendix:		• ***Is slightly hyperaemic***			
	Mucosa:	• ***Fibrosed (all coats specially subserosa)***			
	Wall:	• ***Thickened***			
	Lumen:	• ***Narrowed***			

N.B.I:

- ***Histologically, it proved to be a chronically-inflamed appendix.***
- ***Causes of chronic appendicitis:***
  1. ***Infection by organisms of low virulence associated with partial obstruction of the lumen.***
  2. ***Repeated previous mild attacks of acute appendicitis.***

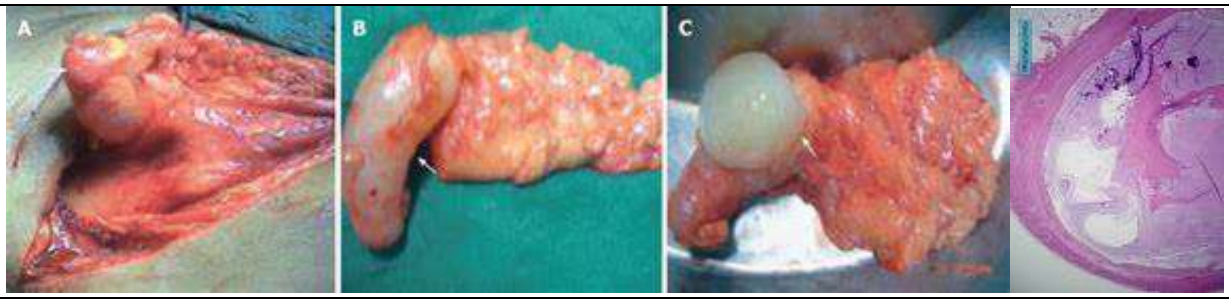
N.B.2.:

- ***Whereas clinically the term "chronic appendicitis" means recurrent pain at region of appendix due to intermittent attacks of acute appendicitis, pathologically, it means infiltration of the appendix with chronic inflammatory cells; but, actually such clinical-chronic cases may prove to be appendices with kinks, twists, increased fibrosis, adhesions, foreign material, increased lymphoid tissue, fecoliths and similar conditions.***

Mucocele					
					
Vermiform appendix:		• ***Is swollen (symmetrical enlargement)***			
	Distal end:	• ***Distended with thin mucus (clear)***			
	Wall:	• ***Thinned out*** • ***Semi-translucent***			
Lining membrane:		• ***Smooth***			

N.B.:

- ***Mucocele of the appendix occurs if there is mild infection of the appendix due to nonvirulent micro-organisms and there is slight obstruction of the proximal portion resulting in distension of the distal end with mucoid fluid → progressive cystic dilatation.***
- ***If this mucocele ruptures, it may lead to pseudo-myxoma peritonei (non-neoplastic).***

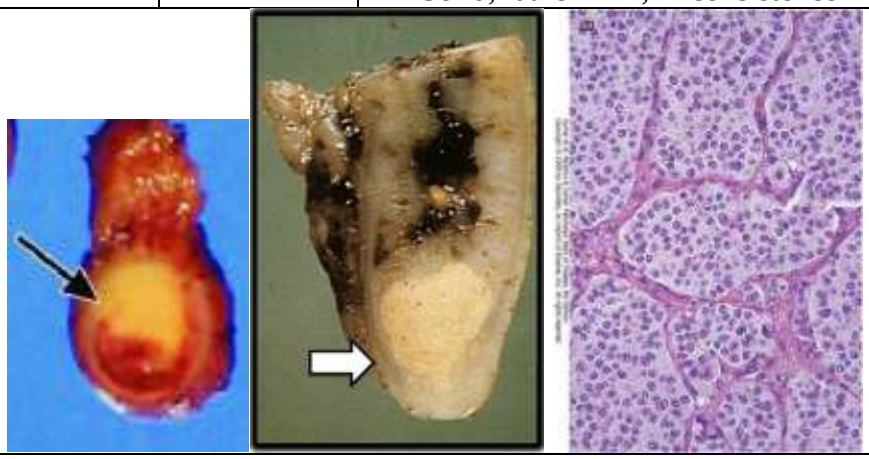


Bilharziasis					
Vermiform appendix:		• Large in size and swollen			
	Wall:	• Thickened and fibrosed • Very slight evidence of congestion • Pale greyish-white			
	Mucosa:	• Very slight yellowish exudate			

N.B.I:

- *Histologically it proved to be bilharzial affection of the appendix.*
- *The slight purulent exudate is due to a superimposed secondary pyogenic infection.*
- ***Obstruction**—which is an important factor in deciding the type (and severity of the acute inflammatory reaction - may be caused by a healed bilharzial lesion.*
- ***The fibrous tissue formation**, which occurs in chronic bilharzial infestation of the appendix, does not hinder the spread of the septic process to the outer coats of the appendix.*
- *Other granulomatous lesions of the appendix are rarely encountered (tuberculosis and actinomycosis).*

Carcinoid of Appendix (argentaffinoma)		
Vermiform appendix:		• Slightly enlarged • Thick-walled and swollen at one area • With narrowed lumen • Shows a nodular mass or tumour
	The tumour:	• Near the tip of the appendix • Moderate in size (1 cm. in diameter) • Rounded and nodular • Well-circumscribed • Reaching the submucosa and musculosa • Bright yellow • Solid, rather firm, in consistence

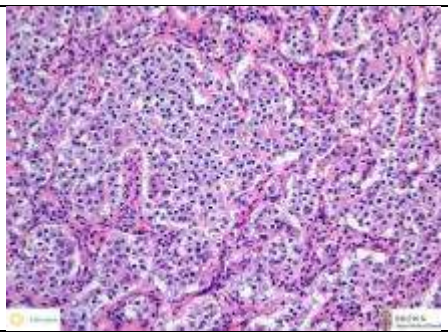


N.B.I:

- Carcinoid of the appendix is a locally-invasive tumour.
- (Only very rarely, it is recorded to infiltrate the regional lymph nodes).
- It does not give rise to metastases; and hence, no carcinoid syndrome (which may be produced by carcinoid of the intestine where metastases may occur): it is the intrahepatic metastatic tumours, of carcinoid of intestine, which produce

excess serotonin and thence the clinical syndrome.

- Some **carcinoids are asymptomatic**; others may simulate acute or chronic appendicitis.
- Commonest site is **the tip or distal third of the appendix**.



N.B.2:

- Tumours of the appendix, in general, are rare whether benign (adenoma, neuroma) or locally invasive with no metastases and no infiltration of regional lymph nodes (carcinoid) or malignant (carcinoma, mesenchymal sarcoma, lymphomatous sarcoma and endothelial sarcoma),

Abnormally-Long Appendix			
Vermiform appendix:	**Is very long (13 cm.)**		

N.B.:

Such a long appendix is liable to produce:

1) ***Kinking of intestine,***
2) ***Predisposition to appendicitis and***
3) ***Intestinal obstruction.***

Other lesions in appendix are:

1) *Parasitic as*
    - *Enterobius vermicularis (responsible for a fair number of catarrhal appendicitis),*
    - *Strongyloides,*
    - *Stercoralis larvae,*
    - *Trichuris trichiura,*
    - *Hymenolepis nana ova,*
    - *Tape-worms and*
    - *Ascaris worms*
2) *Faecal fistula,*
3) *Concretions (fecoliths) and calculi and*
4) *Intussusception.*