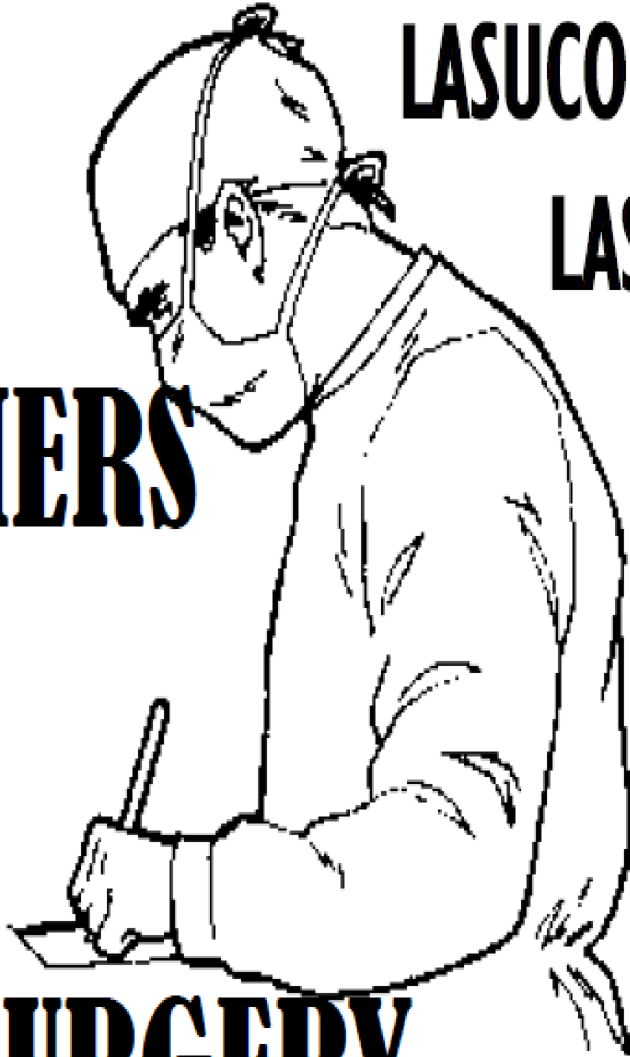
LASUCOM & LASUTH

FRONTIERS OF IKEJA SURGERY



CLINICAL VIGNETTE
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MANAGEMENT OF APPENDICITIS

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MANAGEMENT OF APPENDICITIS

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CASE PRESENTATION

- O. A., 20-year-old, Female, Student
- Abdominal pain x 4/7
- Vomiting x 4/7
- Colicky periumbilical pain, localize to the right iliac fossa, Progressively worsening,
- Non-bilous & non projectile vomiting; Anorexia
- Low grade fever
- Had a similar episode 3 months prior
- No vaginal discharge

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EXAMINATION

- Young lady, not pale, anicteric, acyanosed, afebrile (T=36.7^{0}C)
- Flat abdomen, Right iliac fossa tenderness with Guarding and rebound tenderness
- Normal rectal examination
- Assessment- Acute appendicitis

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TREATMENT PLAN

- Open Retrograde appendectomy
- Operative findings- Inflamed appendix
- Discharged 3rd day after surgery

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DISCUSSION- INTRODUCTION

- Acute appendicitis- inflammation of the vermiform appendix
- Most common acute surgical condition of the abdomen in Nigeria- 15 -40% of all the emergency surgeries done in most hospitals in the country (USA 10/10000/year)
- Approximately 7% of the population will have appendicitis in their lifetime
- Peak incidence- ages of 10 and 30 years
- Incidence is equal among males and females before puberty
- Teenagers & young adults- Male:Female ratio increases to 3:2
- Surgery is the treatment of choice for appendicitis
- Cost & fear of surgery are some of the main reasons for late presentation in Nigeria

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ANATOMY

- Its position varies widely-
  - ➢ Retrocaecal -74%
  - ➢ Pelvic-20%
  - ➢ Post ileal/pre ileal-5%
  - ➢ Paracaecal-1%.
- Location may vary in maldescent of the caecum, situs inversus/non rotation of the bowel, pregnancy

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PATHOPHYSIOLOGY…

- Mucosal disruption with bacteria invasion by bowel flora - Inflammation
- Invading organism- of E. coli, Klebsiella & Enterobacter spp.
- Feacolith about 70% of cases, Serosal adhesion and kinking, Luminal stenosis, Parasitic infection –pinworm ,ova of schistosomiasis, Tumours-carcinoid, caecal pole tumour

CATARRHAL TYPE

- Often from lymphoid hyperplasia (children & young adult)
- Inflammation and oedema occur in the mucosa and submucosa
- Fibrous adhesion formation
- May obstruct the lumen

OBSTRUCTIVE TYPE

- Characterized by a much acute course
- Commoner variety
- More severe
- A progressive disease

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PATHOPHYSIOLOGY

- Lymphatic flow obstruction
- Followed by venous stasis
- Arterial thrombosis then ischemic necrosis of the wall
- Gangrene then perforation then ensue

➢ The initial luminal distension triggers the

➢ visceral afferent pain fibers, which enters at the 10th thoracic vertebra level

➢ Pain is typical felt in the periumbilical area

➢ As inflammation continues, the serosa and adjacent structures becomes inflamed- triggers the somatic pain nerve fiber endings in the parietal peritoneal

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Natural history

- Not always a progressive.
- Progressive in obstructive appendicitis, Luminal obstruction, bacterial overgrowth

➢ Resolution
➢ Recurrence
➢ Ruptures
➢ Appendiceal mass/abscess
➢ Appendiceal mucocele

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PHYSICAL EXAMINATION

SIGNS

- ❖ Rovsing's sign
- ❖ Obturator's sign
- ❖ Iliopsoas sign
- ❖ Aaron's sign
- ❖ Lanz sign
- ❖ Diuelafoys sign
- ❖ Hayem sonneburg sign

UNCOMPLICATED

- Looks ill
- Low grade fever
- Features of peritoneal irritation: tenderness, rebound tenderness, guarding,

COMPLICATED

- High grade fever
- Peritoneal irritation: localized/ generalized]
- Abdominal mass
- Abdominal distension

" No single evaluation can replace the diagnostic accuracy of the skilful physician."

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Diagnostic scoring- Alvarado score

- ✓RIF tenderness: +2
- ✓Increased White cell count: +2
- ✓Pain migrates to RIF: +1
- ✓Rebound tenderness: +1
- ✓Anorexia: +1
- ✓Nausea/Vomiting: +1
- ✓Fever: +1
- ✓White cell count- ‘left shift’: +1

1-4: Very unlikely
5-6: Possible
7-8: Very probable
9-10: Definite

- ❑ Predictive yield is higher in Men
- ❑ Reliable as a ‘rule out criterion’ [high specificity]
- ❑ Not sensitive

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Diagnostic pitfalls

- Pregnant state
- Elderly
- Immunocompromised
- Women in reproductive age group
- Children

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INVESTIGATIONS

- Full blood count
- Abdominal ultrasound
- Abdominal CT SCAN
- Abdominal X-RAY
- Barium enema

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Operative Treatment

- Emergency Open appendectomy
- Emergency Laparoscopic appendectomy

✓3 ports

✓2 ports

✓Single port[SILA]

- Laparoscopic assisted
- Drainage of abscess

✓Percutaneuos

✓open

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Open appendectomy incisions

- McBurney's: Right angle to a line joining ASIS and Umbilicus, at the junction of medial 2/3rd and lateral 1/3rd
- Lanz: skin crease centered on the Mcburneys point
- Rockey davies
- Lower Midline

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Controversies: Laparoscopy vs open appendectomy

“ there is a hidden competition between laparoscopic surgeons and surgeons doing conventional surgery, and this competition influences study”

….RK MISHRA et al, laparoscopic versus open appendectomy. World journal of laparoscopic surgery jan - april 2012 1(1) 19-28

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Antibiotics vs Operative treatment

“ evidence to date is not definite enough to change routine practice , current evidence provides support for the feasibility and safety of antibiotic therapy in patient with uncomplicated acute appendicitis”

-Evidence base review in surgery group 2013

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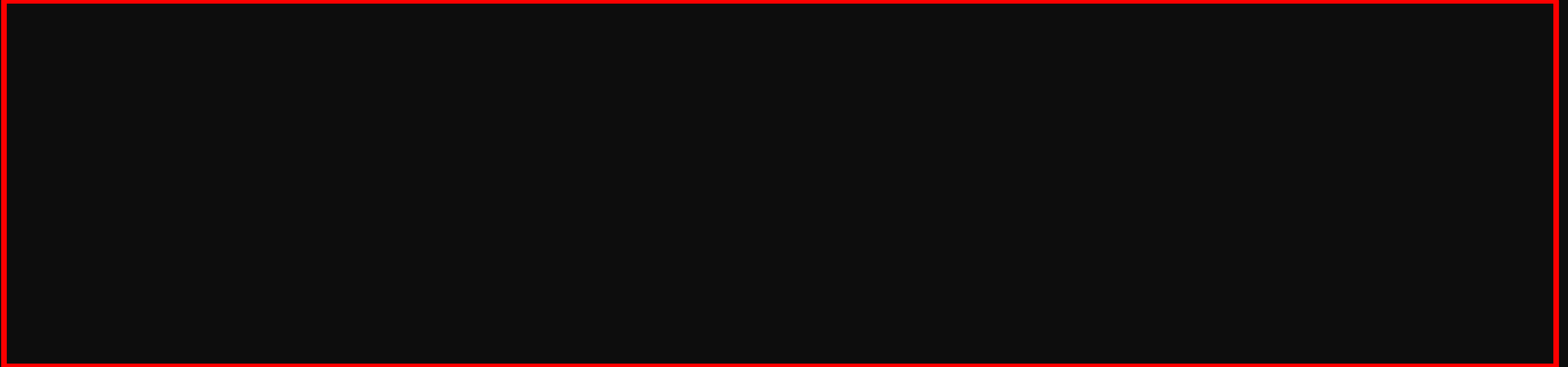
REFERENCES



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