



Laparoscopic appendicectomy versus open appendicectomy: *Comparative study of clinical outcome*

KEYWORDS

MGNREGS, Guaranteed Employment, Empowerment, Financial Security, Standard of Living.

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INTRODUCTION:



- Appendectomy is one of the commonly performed procedures in General surgery. McBurney described the operative technique for right iliac fossa pain using Gridiron incision in 1894.
- This remained the technique for appendicectomy and did not change much until almost a century later, when in 1983, Semm described the first Laparoscopic appendicectomy.
- Laparoscopic appendicectomy for suspected appendicitis is considered safe and effective. It has gained popularity in recent years and has become one of the most widely performed procedures using the laparoscope globally.
- However, it has not become the universal gold standard for acute appendicitis as laparoscopic cholecystectomy has become for acute cholecystitis

OUR STUDY:

AIM:

Compare the clinical outcome and cost effectiveness of Laparoscopic Appendicectomy versus Open Appendicectomy .

Duration of surgery, postoperative complications, hospital stay, pain and requirement of analgesia, resumption of oral feeds, cost of hospital stay and return to normal activities were compared and noted.

INCLUSION CRITERIA:

- History of right lower quadrant pain

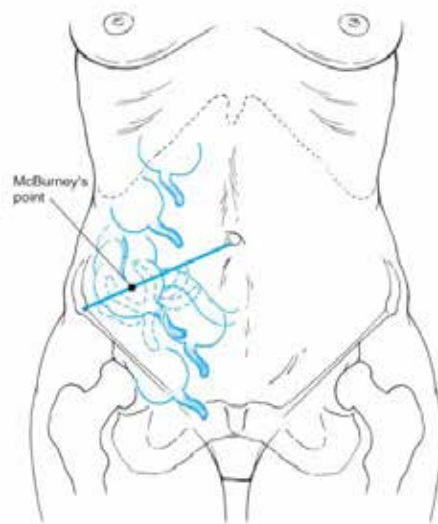
periumbilical pain migrating to the right lower quadrant

- nausea and/or vomiting,
- fever of more than 38°C
- leukocytosis above 10,000 cells per ml,

Right lower quadrant guarding, and tenderness on physical examination.

All patients included were 14 years of age or older.

All patients were informed about the type of surgery and the possibility of conversion to open in case of laparoscopic surgery.



Source: Bruncardi FC, Andersen DK, Billar TK, Dunn DL, Hunter JS, Matthews JB, Pollock RE, Schwartz SI: *Schwartz's Principles of Surgery*, 8th Edition! <http://www.accessmedicine.com> Copyright © The McGraw-Hill Companies, Inc. All rights reserved.

Characteristics	Score
M = migration of pain to the RLQ	1
A = anorexia	1
V = nausea and vomiting	1
T = tenderness in RLQ	2
R = rebound pain	1
E = elevated temperature	1
L = leukocytosis	2
S = shift of WBC to the left	1
Total	10

**LAPAROSCOPIC APPENDICECTOMIES
OPEN APPENDICECTOMIES**

9-10: almost certain appendicitis and should go to OR.

7-8: high likelihood of appendicitis, imaging study.

5-6: compatible but not diagnostic, CT scan is appropriate.

0-4: extremely unlikely

EXCLUSION CRITERIA:

- The diagnosis of appendicitis is not clinically established
- History of symptoms for more than 5 days
- Palpable mass in the right lower quadrant, suggesting an appendiceal abscess treated with antibiotics and possible percutaneous drainage.

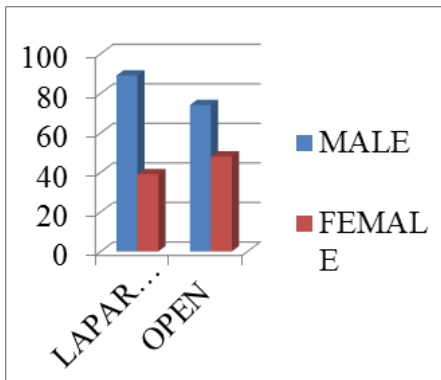
SEX DISTRIBUTION:

LAPAROSCOPIC APPENDICECTOMIES

SEX	NO.	PERCENTAGE
MALE	89	69.53%
FEMALE	39	30.46%

OPEN APPENDICECTOMIES

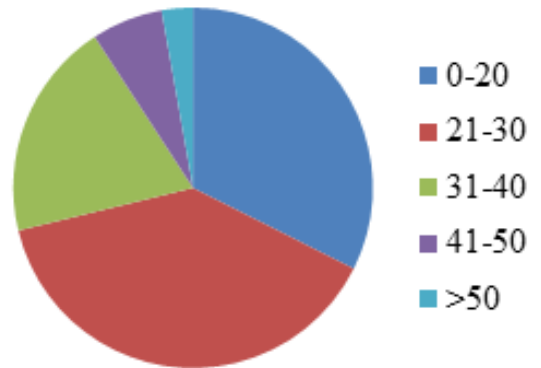
SEX	NO.	PERCENTAGE
MALE	74	60.65%
FEMALE	48	39.34%



AGE DISTRIBUTION OF TOTAL CASES

AGE DIST. (IN YRS.)	NO. OF CASES	%
0-20	81	32.4
21-30	97	38.8
31-40	49	19.6
41-50	16	6.4
>50	7	2.8

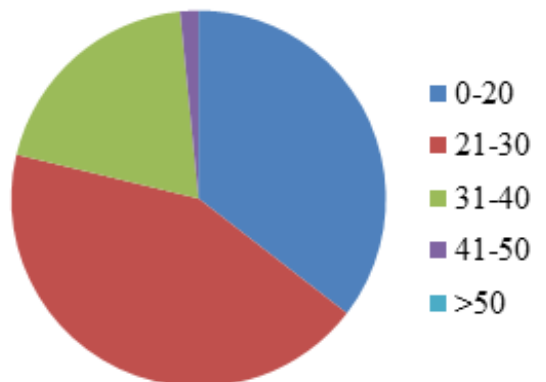
AGE DISTRIBUTION



AGE DISTRIBUTION OF LAPAROSCOPIC APPENDICECTOMY

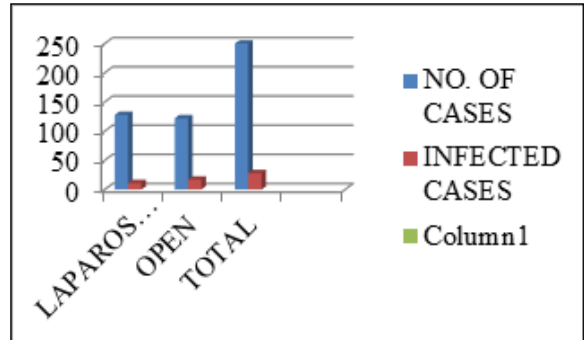
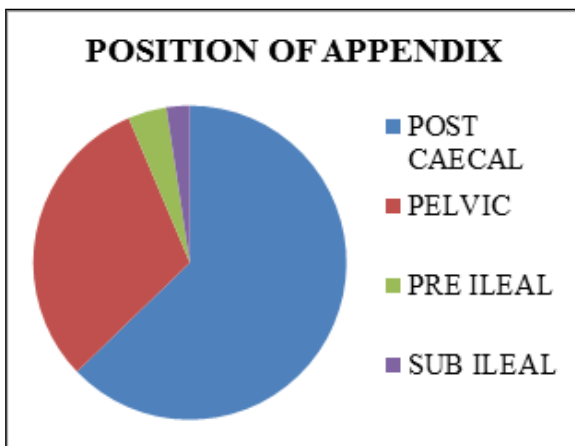
AGE DISTRIBUTION (IN YRS.)	NO. OF CASES	%
0-20	45	35.15
21-30	55	42.96
31-40	25	19.5
41-50	2	1.56
>50	0	0

AGE DISTRIBUTION

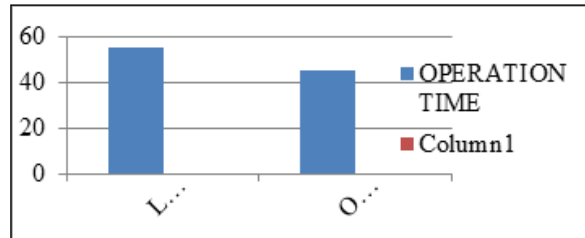


POSITION OF APPENDIX

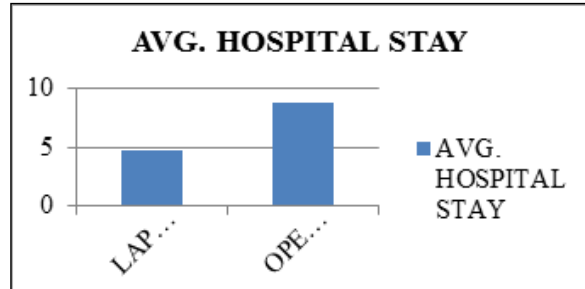
POSITION	NO OF CASES	PERCENTAGE
POST CAECAI	157	62.8%
PELVIC	77	30.8%
PRE ILEAL	10	4%
SUB CAECAI	6	2.4%



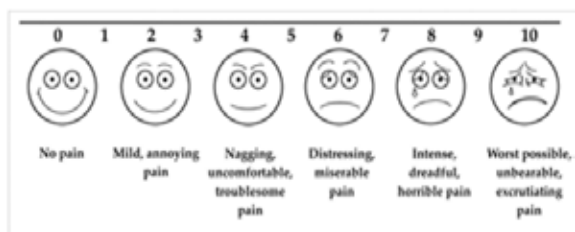
OPERATION TIME:



AVERAGE HOSPITAL STAY



VISUAL PAIN ANALOG SCALE



WOUND INFECTION

TYPE OF SURGERY	NO OF CASES	INFECTED CASES	%
LAPAROSCOPY	128	11	8.59
OPEN	122	17	13.9
TOTAL	250	28	11.2

DISCUSSION:

- Our study included a total of 250 cases, of which 128 are laparoscopic and 122 are open.
- Highest incidence is seen in 2nd & 3rd decades.
- Retrocaecal (62.8%) is the most common position followed by pelvic (30.8%) and subcaecal (2.4%)
- 8 cases were converted from laparoscopic to open procedure.
- Patients were mobilized 12 hrs and 36-48 hrs after laparoscopic and open procedures respectively.
- Oral feeds were allowed after 24 hrs and 48 hrs of laparoscopic and open procedures respectively
- Appendicectomy is the treatment of choice for acute appendicitis and is by far the most commonly performed emergency abdominal operation.
- Although, open appendectomy is considered a safe and effective operation for acute appendicitis with low morbidity, however, variability in the inflammatory process and the location of appendix at times causes operative difficulties.
- It has also been associated with potential disadvantages like post-operative pain, wound sepsis and complications like post-operative urinary retention (due to spinal), intestinal obstruction which may delay recovery.
- With the development of laparoscopic technique, it has emerged as a modus operandi for both diagnosis and treatment of acute appendicitis. Studies have shown the procedure to be effective and with improved cosmesis, reduced postoperative pain, days of hospitalization and early return to work.

- Laparoscopic appendectomy was first reported in 1983 and has since been considered safe with high accuracy and complication rates as low as zero to 1.4%.
- Besides, laparoscopy preserves the option of leaving a macroscopically normal appendix safely in place, it also allows localization of the area of inflammation, making it possible to plan an incision if converting to open appendectomy, gives a better view to examine other peritoneal and pelvic organs, minimizing the chances of negative appendectomy and missing other pathologies

CONCLUSION:

- Laparoscopic Appendectomy was better than Open Appendectomy with respect to wound infection rate, early resumption of oral feeds, post operative pain, lesser use of antibiotics, post operative hospital stay, and return to normal activities.
- However, open procedure had the advantage of lesser duration of operation, complication rate, and lesser cost of surgery.

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