"PROSPECTIVE EVALUATION OF CORRELATION BETWEEN THE SIGNS AND SYMPTOMS OF ACUTE APPENDICITIS WITH THEIR RESPECTIVE INTRA OPERATIVE POSITIONS OF APPENDIX":- A ONE YEAR OBSERVATIONAL STUDY, AT KAHER'S DR. PRABHAKAR KORE CHARITABLE HOSPITAL AND MEDICAL RESEARCH CENTRE.

BY

REG NO: BH0120011

Dissertation

Submitted to
KAHER, Belagavi, Karnataka,
In partial fulfilment of the requirements for the degree of

MASTER OF SURGERY (M.S.)
in
GENERAL SURGERY

DEPARTMENT OF GENERAL SURGERY
JAWAHARLAL NEHRU MEDICAL COLLEGE,
KAHER, BELAGAVI – 590010
KARNATAKA.

JUNE/JULY 2023

KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH,

BELAGAVI, KARNATAKA.

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Dr. S.C. METGUD, MS
Professor and HOD,
Department of General Surgery,
J. N. Medical College,
Belagavi

Date: 30/12/22
Place: Belagavi

KAHER J.N. MEDICAL COLLEGE BELAGAVI

Dr. N. S. MAHANTSHETTI, MD
Principal,
J. N. Medical College,
Belagavi

PRINCIPAL
J.N. Medical College,
BELAGAVI- 590 010

Date: 02/01/2023
Place: Belagavi

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Nehru Nagar, Belagavi- 590 010, Karnataka, INDIA

0831 - 2471350 0831 - 2470759 www.jnmc.edu principal@jnmc.edu

Ref No: MDC/PG/ Date: 14-12-2022.

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The softcopy of thesis entitled: **"PROSPECTIVE EVALUATION OF CORRELATION BETWEEN THE SIGNS AND SYMPTOMS OF ACUTE APPENDICITIS WITH THEIR RESPECTIVE INTRA OPERATIVE POSITIONS OF APPENDIX- A ONE YEAR OBSERVATIONAL STUDY, AT KAHER'S DR. PRABHAKAR KORE CHARITABLE HOSPITAL AND MEDICAL RESEARCH CENTER, BELAGAVI-590010 "** has been submitted for Anti-Plagiarism check through Turnitin software. The scan has been carried out and the scanned output reveals a match percentage of **03%** which is within the acceptable limits of **10%** as per the guidelines given by UGC.

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Chairperson-Antiplagiarism Committee &
Principal,
J. N. Medical College, Belagavi.

To,
Reg. No. BH0120011,
Postgraduate Student,
2020-21 Batch,
Department of General Surgery,
J. N. Medical College, Belagavi.

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JAWAHARLAL NEHRU MEDICAL COLLEGE,
NEHRU NAGAR, BELAGAVI-590010 (KARNATAKA-INDIA)
Website: http//www.jnmc.edu
E-Mail : dome@jnmc.edu
Phone: (+ 91-(0)831 Office : 2472550
Principal: 2471701
Fax No. +91 (0)831 – 2470759

Ref: MDC/DOME/ 114 **Date: 25/01/2021**

To,

REG NO: BH0120011

PG student in Surgery,
J.N.Medical College,
BELAGAVI.

Sub: Institutional Ethical Clearance for the study.

With reference to the above, we wish to inform you that your proposed research project titled **"PROSPECTIVE EVALUATION OF CORRELATION BETWEEN THE SIGNS AND SYMPTOMS OF ACUTE APPENDICITIS WITH THEIR RESPECTIVE INTRA OPERATIVE POSITIONS OF APPENDIX** – A ONE YEAR OBSERVATIONAL STUDY, AT KAHER'S DR. PRABHAKAR KORE CHARITABLE HOSPITAL AND MEDICAL RESEARCH CENTRE, BELAGAVI-590010**",** is ethical and justifiable. The proposed research project has been cleared by the JNMC Institutional Ethics Committee on Human Subjects Research.

(Dr. Smita Sonoli)
Member Secretary
JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belagavi.

(Dr. Harsha Hegde)
Chairman,
JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belagavi.

LIST OF ABBREVIATIONS

AA	-	Acute appendicitis
OA	-	Open appendicectomy
LA	-	Laparoscopic appendicectomy
RLQ	-	Right lower quadrant
HPE	-	Histopathological examination
SD	-	Standard deviation
RIF	-	Right iliac fossa
PID	-	Pelvic inflammatory disease
UTI	-	Urinary tract infection
USG	-	Ultrasonography
CT	-	Computer tomography
SMA	-	Superior mesenteric artery

ABSTRACT

"PROSPECTIVE EVALUATION OF CORRELATION BETWEEN THE SIGNS AND SYMPTOMS OF ACUTE APPENDICITIS WITH THEIR RESPECTIVE INTRA OPERATIVE POSITIONS OF APPENDIX"

Aims and objectives:

To establish the correlation between intra operative position of appendix with their respective clinical presentations.

Methods:

The source of was all the patients presenting with acute appendicitis admitted in general surgery wards at KAHER'S Dr Prabhakar Kore Charitable Hospital and Medical Research.

a) **Study design** : A Prospective, observational study

b) **Duration of data collection: 1 year**

c) **Study period : January 2020 to December** 2021

d) **Sample size: 85**

i. **Inclusion criteria**

a) Patients presenting with acute appendicitis.

b) Patients undergoing open or laparoscopic appendicectomy.

c) Patients that are histo-pathologically confirmed cases of acute appendicitis.

ii. **Exclusion criteria**

a) Patients with other accompanying abdominal pathologies.

b) Intestinal obstruction.

c) Pancreatitis.

d) Intestinal perforation.

e) Any non-specific abdominal pain.

f) Pregnant women.

g) Patients who have not given the consent.

Results:

In the current study signs and symptoms of appendicitis were corelated with the positions of appendix such as retrocecal, pelvic, pre-ileal, post-ileal, subhepatic.

73% of appendicitis in pelvic position presented with loose stools, Obturator test showed 74% positive results in appendicitis of pelvic position.

Rovsing's sign and cope psoas test were positive in 65% of the patients with appendicitis of retrocecal position.

Conclusion:

The present study showed high sensitivity of Baldwing's sign, Rovsings sign, cope psoas test and loose stools in predicting the intra operative position of appendix. Loose stools were highly associated with pelvic position. The presentations of various positions of appendix are found to be in different ways preoperatively, with each position having specific sign or symptom closely correlated to it.

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INTRODUCTION

The most common, though occasionally perilous, cause of acute abdomen in people of all ages is appendicitis. The appendix is thought of as a vestigial organ that is worthless to humans and has no known significant function, but it can occasionally be a great pain if it becomes the site of an infection.

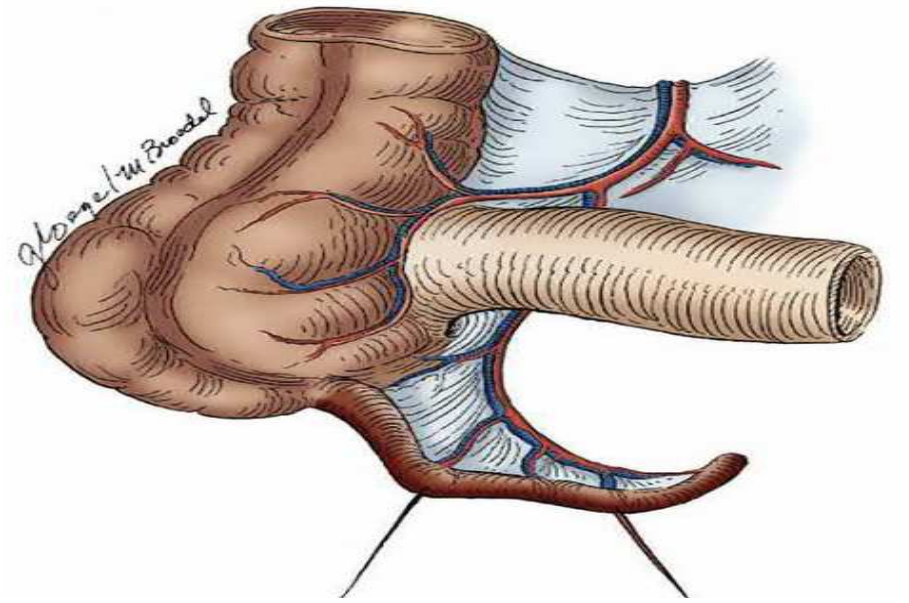


Figure 1: A normal appendix

A French physician named Claudius performed the first appendectomy in 1735, removing an 11-year-old boy's appendix that had been successfully pierced by a pin from within the hernia sac. [(1)]

Patients with acute appendicitis frequently report vague abdominal discomfort, which is typically of periumbilical origin and is caused by the appendix's increasing distention stimulating certain visceral afferent pathways. The presence of nausea with or without accompanying vomiting is common, as well as anorexia. Constipation or

diarrhoea may also be present. The right lower quadrant of the abdomen becomes the pain's traditional position when the condition worsens and the appendiceal tip swells up, causing peritoneal irritation. This phenomenon continues to be a trustworthy sign of appendicitis. This ought to serve to raise the clinician's level of appendicitis suspicion even higher.

The appendix position can vary owing to the different lengths of appendix and position of caecum. There is a variation of clinical features according to the position of appendix. In a retrocaecal appendicitis, when the organ is entirely retroperitoneal there is hardly any tenderness and rigidity in the anterior abdomen, there may be some tenderness in the right flank or more posteriorly.

If the appendix lies in close relation to the right ureter, the patient may complain of haematuria and pain radiating from loin to groin. This confuses the clinician, and the diagnosis of ureteric stone has often been wrongly made.

Whereas in a pelvic appendicitis, the picture becomes more confusing due to a history of diarrhoea. Irritation of bladder(strangury) and the rectum are also very confusing. [(3)] Even in pelvic position, the tenderness and rigidity may not be so prominent on the anterior abdominal wall as in normal. Moreover, with the presence of other symptoms like diarrhoea, the chances of a wrong diagnosis are very high.

Hence, it is very essential to study, compare and establish the relation between the positions of the appendix and their specific clinical presentations.

OBJECTIVE OF THE STUDY:

- To assess the correlation between intra operative position of appendix with their respective clinical presentations.

REVIEW OF LITERATURE

Historical analysis :

In 1735, Claudius Amyand conducted the first appendicectomy on an 11-year-old kid who had an extremely inflamed appendix and an inguinal hernia. An Amyand's hernia is the condition, in which the appendix is also present in the hernial sac. (1)

In 1755, Heister recognized that the appendix could be a site of primary inflammation. In 1848, Hamock successfully drained an appendix abscess from a pregnant woman during her eighth month of pregnancy. Lawson Tait performed the first abdominal appendicectomy in 1880. (15)

Leonardo da Vinci's 1492 anatomical drawing clearly depicted the appendix.

Reginald Fitz, a professor at Harvard, is credited with coining the term "appendicitis."

In 1530, Vidovidus coined the term "vermiform appendix" to describe the worm-like organ.

In 1889, Charles Mc Burney identified the Mc Burney's point as a point of maximum tenderness for appendicitis. (19)

In 1890, Fredrick Treves described the first conservative management of acute appendicitis.

The appendix was discovered to be a site of inflammatory disease two hundred years after its anatomical description. Fitz's publication 120 years later confirmed this. American surgeon proved that early appendectomy was safe and life-saving. Perforation of the appendix with peritonitis is still a serious problem, but the mortality rate has dropped dramatically. [6]

EMBRYOLOGY AND ANATOMY (2):

By the sixth week of pregnancy, the appendix, along with the caecum, ascending colon, descending colon, and right 2/3 of the transverse colon, is developed from the midgut.

It grows quickly from a bud at the junction of the small and large bowels into a pouch. The proximal part of the bud grows quickly to form the caecum, but the distal part remains narrow and forms the appendix. [3]

As a result, the lateral wall of the caecum grows much faster than the medial wall, and the point of attachment of the appendix moves to the caecum's posteromedial aspect.

The appendix is short and broad at its junction with the caecum at birth, but differential caecal growth produces the typical tubular structure by the age of two years. During childhood, the appendix is frequently rotated into a retrocaecal but intraperitoneal position due to continued caecum growth.

The vermiform appendix is a narrow, vermian (worm-shaped) tube that emerges from the posteromedial caecal wall, 2 cm or less below the ileum's end. It can be found in the following locations:

1. Retrocaecal position (12 o'clock) - directed upwards in the retrocaecal recess. If the length is greater, the condition could be retrocolic or subhepatic.

2. Right paracaecal position (11 o'clock): lies on the right side of the caecum.

3. Left paracaecal (1 o'clock) position: lies on the caecum's left side. It could be either preileal or postileal.

4. Splenic (2 o'clock) position: aimed at the spleen.

5. Promontoric position (3 o'clock): facing sacral promontory.

6. Crosses the pelvic brim and lies in true (four to five o'clock) pelvis.

7. Appendix in mid-inguinal position at 6 o'clock.

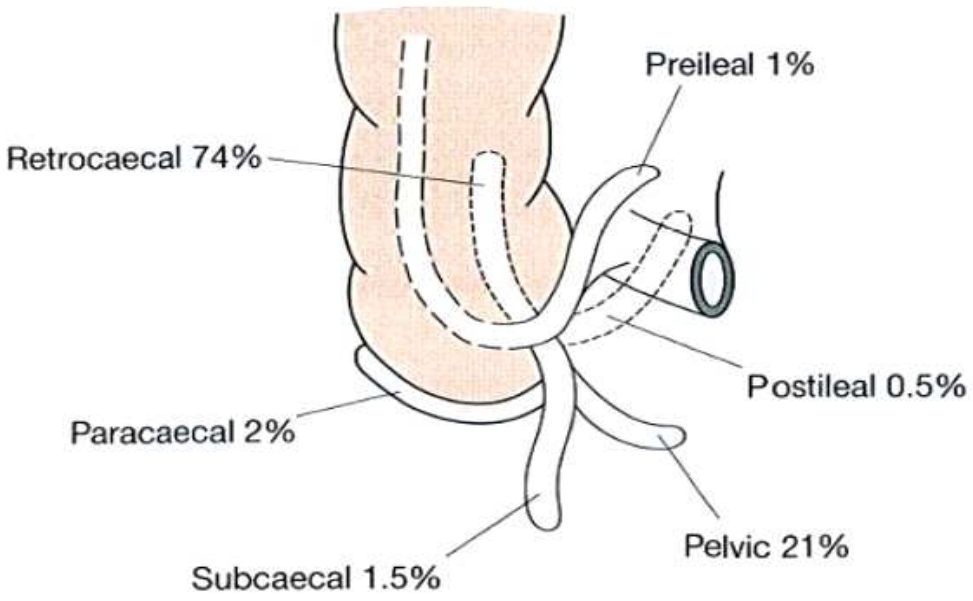


Figure 2: Positions of the appendix

The location of appendix as follows [7]

Retrocaecal and retrocolic	:	74%
Pelvic	:	21%
Sub caecal	:	1.5%
Pre ileal	:	1%
Post ileal	:	0.5%

With an average length of 9 cm, the length ranges from 2 to 20 cm. Compared to adults, it is lengthier in youngsters. It has a 5 mm diameter roughly. The lumen is quite small and can disappear by the middle of adulthood. The appendicular orifice is located 2 cm below the ileo-caecal orifice at the posteromedial side of the caecum. Occasionally, the appendicular orifice is marked by the valve of Gerlach, a vague semilunar fold of mucous membrane. [7]

The mesoappendix is a tiny, triangular peritoneal fold that suspends the appendix. Though it may run closer to the base of the appendix, the appendicular artery frequently flows in its free border.

Blood supply

The ileocolic artery, a branch of the SMA , supplies blood to the caecum by its anterior and posterior caecal branches.

Through the mesoappendix, appendicular artery, enters the appendix. The posterior caecal artery may give rise to an accessory appendicular artery, also known

as the Seshachalam artery. If the meso appendix is absent, the artery that runs along the distal wall of the appendix may be thrombosed in cases of acute appendicitis. [5]

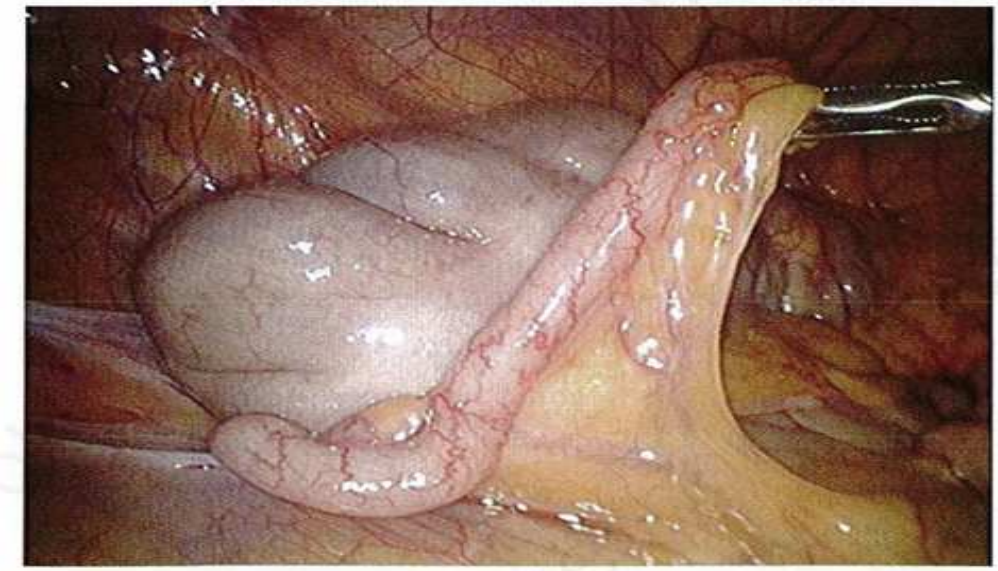


Figure 72.3 Laparoscopic view of a normal appendix with meso-appendix displaying the appendicular artery.

Figure 3: laparoscopic view of appendix

Venous drainage

The portal vein receives venous drainage through the superior mesenteric, ileocolic, and appendicular veins.

Lymph nodes surrounding the ileocolic vessels receive lymphatics from appendix.

The vagus nerve supplies afferent parasympathetic innervation, and the superior mesenteric plexus (T10-L1) supplies sympathetic innervation. [7]

HISTOLOGY

The serosa, an extension of the peritoneum, the muscularis propria, the submucosa, the muscularis mucosae, and finally the mucosa make up the five main layers that make up the appendix wall.

The crypts are uneven and each one has a few argentaffin cells, but the mucosal layer mimics that of the large intestine. Neuroendocrine complexes are located between the muscularis mucosae and the crypts. [(7)] There are noticeable lymphoid nodules with a follicular centre and a mantle of lymphocytes in the appendix's mucosal layer. The lymphocytes around the follicles impinge on the muscularis mucosae. Lymphatic tissue develops during the first year of life and steadily gets atrophied as the age increases.

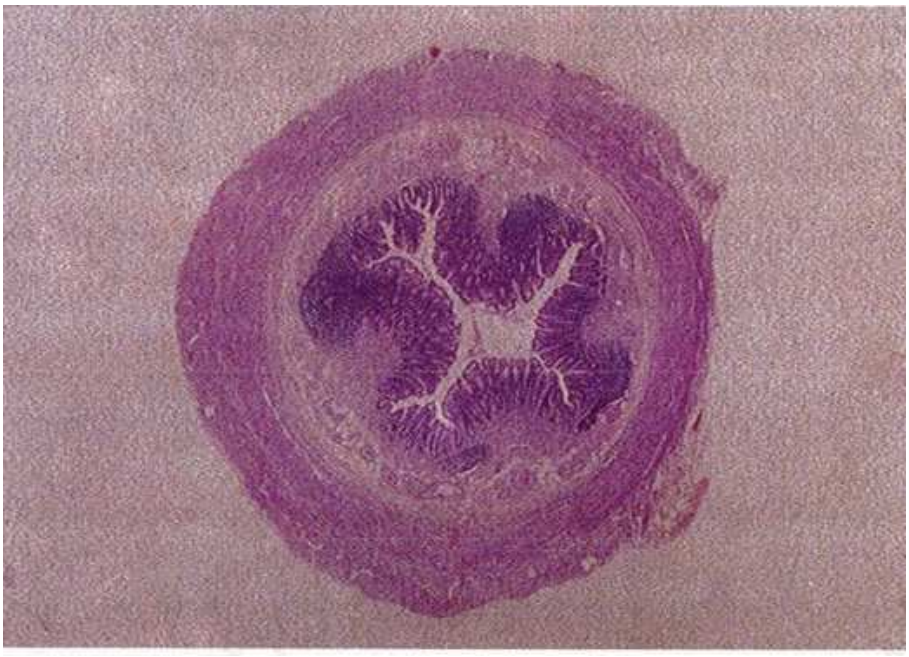


Figure 4: Histology of appendix

Epidemiology

In the course of routine surgical practise, acute appendicitis constitutes a significant emergency. It affects people of all ages, nationalities, and religions.

Every year, 250,000 appendicitis cases are reported in the United States. Since the late1940s, there have been fewer incidences of acute appendicitis; today, there are 10 cases per 100,000 people annually. [10]

Due to the dietary choices of the people living in these regions, there are likely fewer cases of acute appendicitis in Asian and African nations. [11]

The prevalence of appendicitis generally increases from birth, peaks in adolescence, and then gradually decreases as people age. It is more common in people aged 10 to 19 years. [12]

The proportion of cases among individuals aged 30-69 has risen to 6.3% in recent years. [13]

Indian studies on the epidemiology of acute appendicitis are scarce. However, a 3-year epidemiological trend of acute appendicitis in a rural setting was recently documented by Lohar HP et al.22. The age groups of 11 to 20 years account for 44.6% of appendicitis cases, while the age groups of 21 to 30 years account for 36.1%. The age range of 31 to 40 years makes up 11.5%. Age group 0 to 10 years, it is 3%. Age groups between 41 and 50 and 51 to 75 years each contribute.

The authors came to the conclusion that acute appendicitis should be suspected regardless of an individual's age, sex, or socioeconomic position. Appendicitis incidence by age and sex ratio suggest that the epidemiologic

characteristics of acute appendicitis vary by country. Appendicitis is challenging to detect in small children, young women, and the elderly. TLC, urine microscopy, ultrasonography, and computed tomography of the abdomen should all be utilised in conjunction with physical findings as a diagnostic help in dubious situations; nevertheless, they should not take the place of a general surgeon's clinical judgement.

Pathogenesis

Fecolith-induced blockage of the appendiceal lumen is frequently linked to appendicitis. In addition, obstruction may result from gallstones, worms (ascaris), foreign substances, tumours, inspissated barium, or hypertrophy of lymphoid tissue. (4)

After the appendiceal lumen becomes blocked, persistent mucus secretion and inflammatory exudation cause distension, mucosal edoema, and mucosal ulceration, as well as the transfer of microorganisms to the submucosa. Visceral afferent fibres are stimulated by the enlargement of the appendix, and the patient feels pain in the periumbilical region or epigastrium. (4)

As intraluminal pressures rise, further distension impairs lymphatic and venous outflow and causes appendiceal vascular congestion. The serosa rapidly becomes involved in the inflammatory process. Patients frequently report the traditional shift of discomfort to the right lower quadrant when the inflamed serosa of the appendix makes contact with the parietal peritoneum. Gangrenous appendicitis results from the subsequent intramural venous and arterial thromboses. (4)

Appendiceal infarction and perforation are the results of persistent ischemia. Peritonitis can be localised or universal if the appendix ruptures and pus leaks into the peritoneal cavity. More frequently, an inflamed or perforated appendix might be

walled off by the nearby larger omentum and small bowel loops, leading to a paracecal abscess or phlegmonous mass. [4]

This progression need not always occur; if the obstruction is removed, some cases of acute appendicitis may cure on their own. Rarely does appendiceal inflammation go away, leaving a mucocele of the appendix—a swollen, mucus-filled appendix. [4]

Clinical features:

A thorough physical examination of the abdomen is more important for the diagnosis of appendicitis than any component of the patient's history or a laboratory test.

"The symptoms occur virtually without exception in the sequence below — and the order differs, I always question the diagnosis," noted Murphy, listing the symptoms of appendicitis and the order in which they manifest. With rare exceptions, this is generally accurate. [5]

'Murphy's trinity' is typically defined as pain, vomiting, and fever.

1. Anorexia: This condition is crucial in the diagnosis of appendicitis.

2. Abdominal pain - After anorexia, abdominal pain develops. The first pain is centred in the midsection, but it eventually migrates to the RLQ and stays there.

When local peritonitis and inflammation have migrated to the appendix's serosal covering, the pain shifts.

Tenderness is evoked when pressure is applied at McBurney's point. This point, often known as McBurney's sign, corresponds to the base of the appendix. [8] The spino-umbilical line's lateral third and medial two thirds meet at this position.

3. Nausea and vomiting - Any luminal structure that is distended or blocked can elicit nausea, which is more common in youngsters, and vomiting.

4. Guarding and stiffness - Guarding is a voluntary defensive mechanism that stops palpation. Rigidity, on the other hand, results from an uncontrollable defensive spasm of the muscles when an inflamed organ comes into touch with it. According to how close the inflammatory process is to the anterior parietal peritoneum, the degree of stiffness increases. [9]

5. Pyrexia - A tachycardic fever of only 99°F or 100°F is typically

6. Peritoneal symptoms

Diagnostic Criteria	Point Value
Symptom	
Migration of pain	1
Anorexia or urine acetone	1
Nausea/emesis	1
Sign	
RLQ tenderness to palpation	2
Rebound tenderness	1
Pyrexia ≥37.3°C	1
Laboratory values	
Leukocytosis	2
Left shift	1

Abbreviation: RLQ, right lower quadrant.

Figure 5: Diagnostic criteria of appendix

Signs:

a. Referred rebound tenderness is another name for the Rovsing's sign, which occurs when the left iliac fossa is palpated and causes discomfort in the RIF.

Rebound tenderness in the RLQ is a Blumberg sign (release sign) that signals localized peritonitis.

A retrocaecal appendix is located on the psoas major muscle. This becomes inflamed, which irritates the psoas muscle and creates pain when the hip joint flexes.

Copes obturator test result: Right thigh pain during internal rotation and flexion as a result of the inflamed appendix aggravating the iliopsoas and obturator internus muscles.

e. Ott's sign: When the patient is lying on their left side, they have more pain and discomfort in their RIF.

A discomfort is felt when pressing away the skin and subcutaneous tissue on either side of the umbilicus between the thumb and finger, which is Liget's sign. [9]

Clinical features according to positions:

1. **Pelvic appendicitis:** Bladder irritation results in strangury, while irritation of the rectum results in mucous passage and tenesmus. [6]

2. **Post ileal**: Although uncommon, diarrhoea is a common symptom that is accompanied by conspicuous retching and discomfort.

3. **Retrocaecal appendicitis:** Oftentimes, retrocaecal appendicitis lacks rigidity. Both Rovsing's sign and the psoas test are positive. The result could be back or flank pain.

Rovsing's sign:

Fig.33.7.— Eliciting Rovsing's sign. The left iliac fossa is pressed and the pain is appreciated in the right iliac fossa in case of acute appendicitis.

Figure 6: Rovsing's sign

Cope's psoas test:

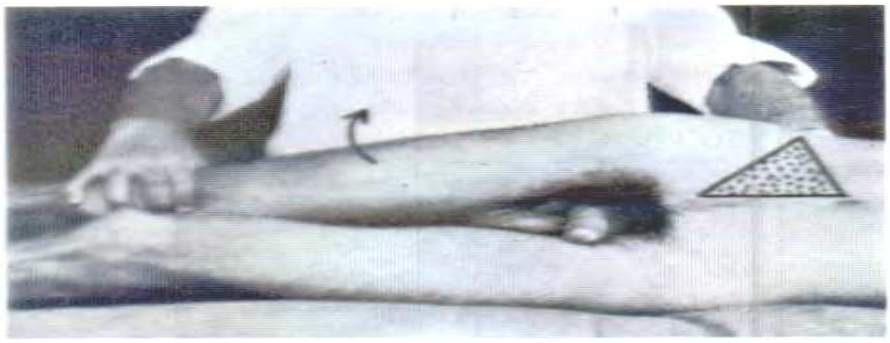


Fig.33.8.— Method of eliciting Cope's psoas test. The right thigh is being hyperextended which will initiate pain in a case of retrocaecal appendicitis. Note the position of Sherren's triangle, indicated by dots.

Figure 7: Cope's psoas test

Cope's obturator test:

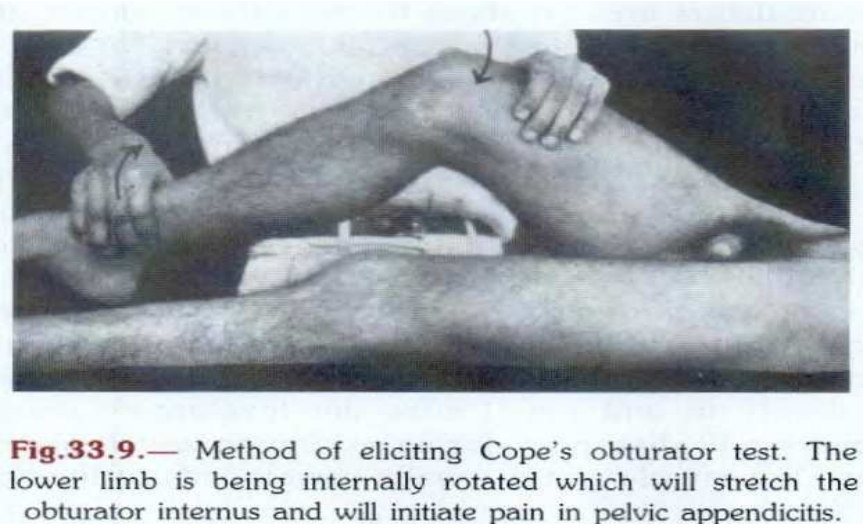


Fig.33.9.— Method of eliciting Cope's obturator test. The lower limb is being internally rotated which will stretch the obturator internus and will initiate pain in pelvic appendicitis.

Figure 8: Cope's obturator test

Treatment:

Surgical management:

Acute appendicitis can only be treated with an appendectomy. Confirmed cases ought to be operated right away.

Since its introduction by McBurney, the open appendectomy (OA) has stood the test of time for more than a century. Laparoscopic appendectomy (LA) has struggled to demonstrate its superiority to open surgery since its first description by Semm in 1983. Recent prospective randomised trials suggest that laparoscopic appendectomy may have advantages over open surgery for the removal of an inflamed appendix. According to numerous publications, laparoscopic appendectomy reduces postoperative complications and hospital stays while also requiring less pain medication. This is most likely due to the fact that the majority of cases are handled by junior surgical staff on an emergency basis outside of work hours.

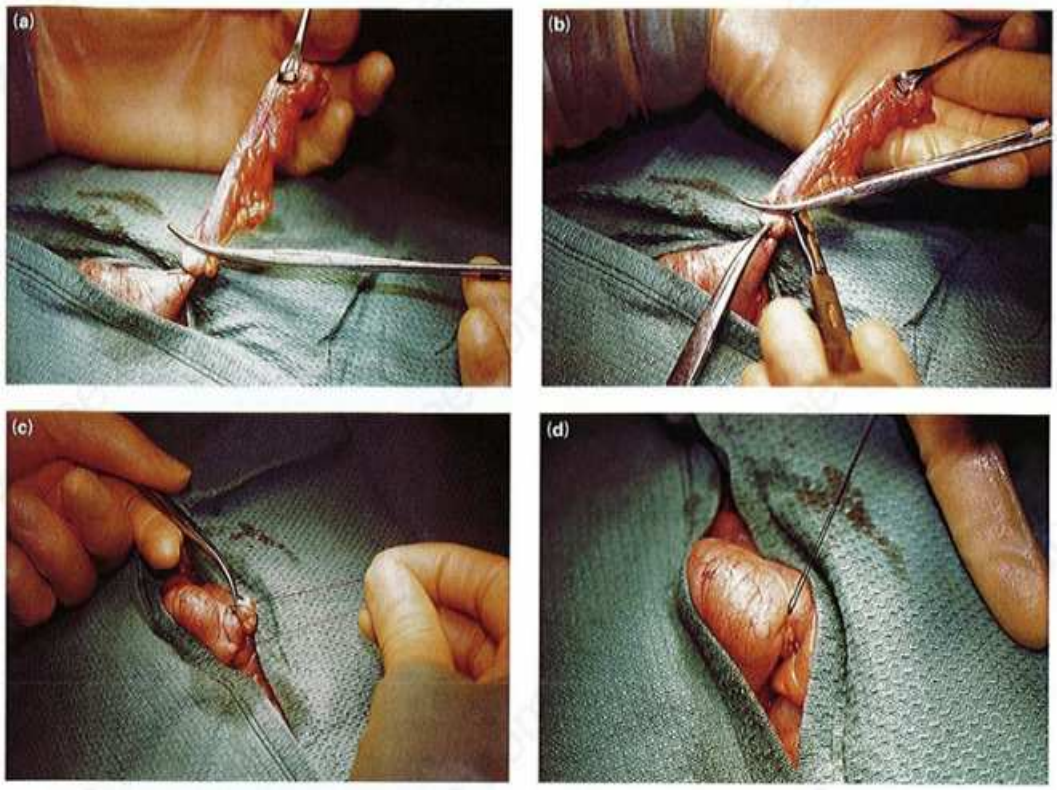


Figure 10: Open appendicectomy

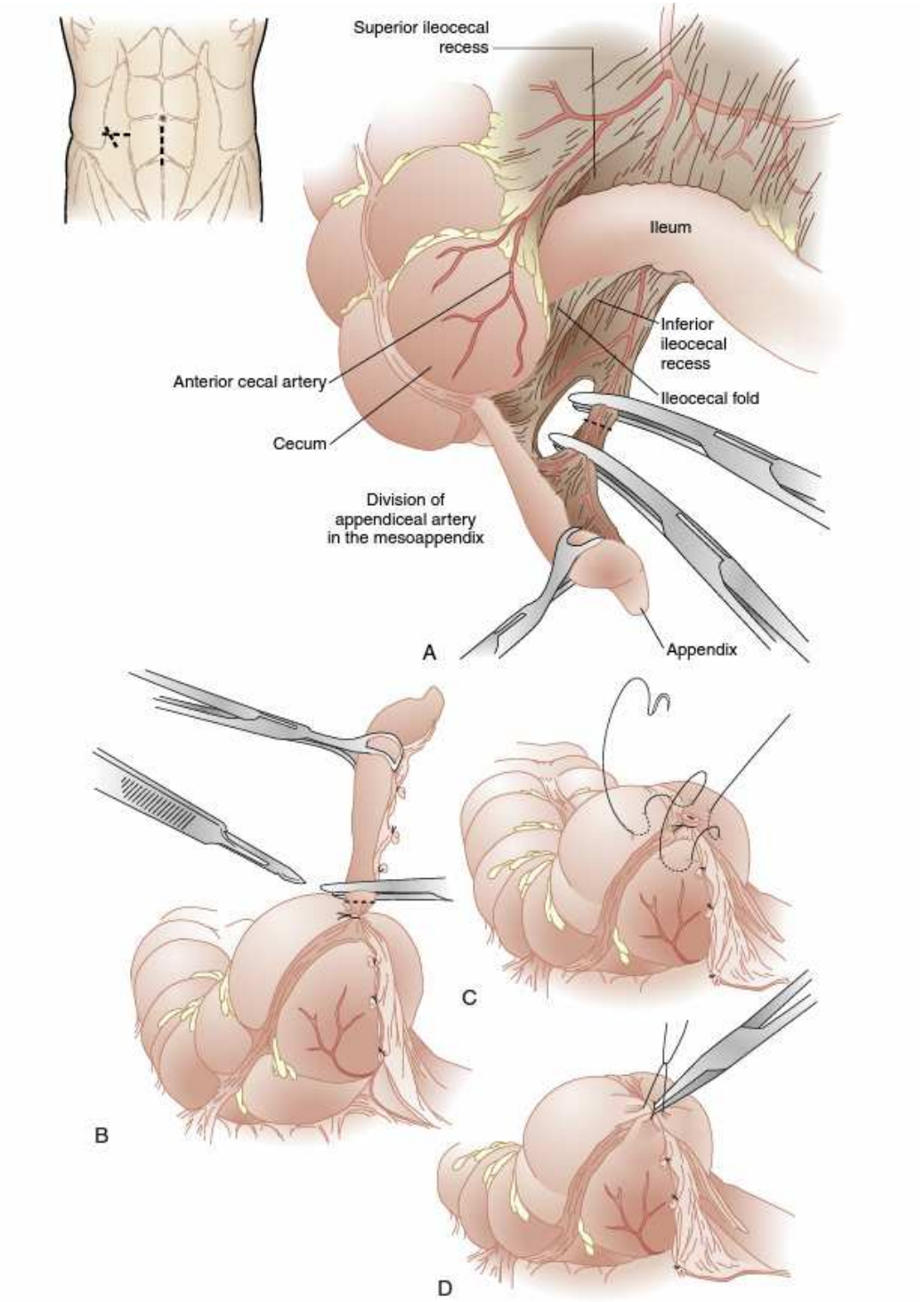


FIG. 51.4 (A) *Left*, Location of possible incisions for an open appendectomy. *Right*, Division of the mesoappendix. (B) Ligation of the base and division of the appendix. (C) Placement of purse-string suture or Z stitch. (D) Inversion of the appendiceal stump. (From Ortega JM, Ricardo AE. Surgery of the appendix and colon. In: Moody FG, ed. *Atlas of Ambulatory Surgery*. Philadelphia: WB Saunders: 1999.)

Figure 9: Steps of appendicectomy

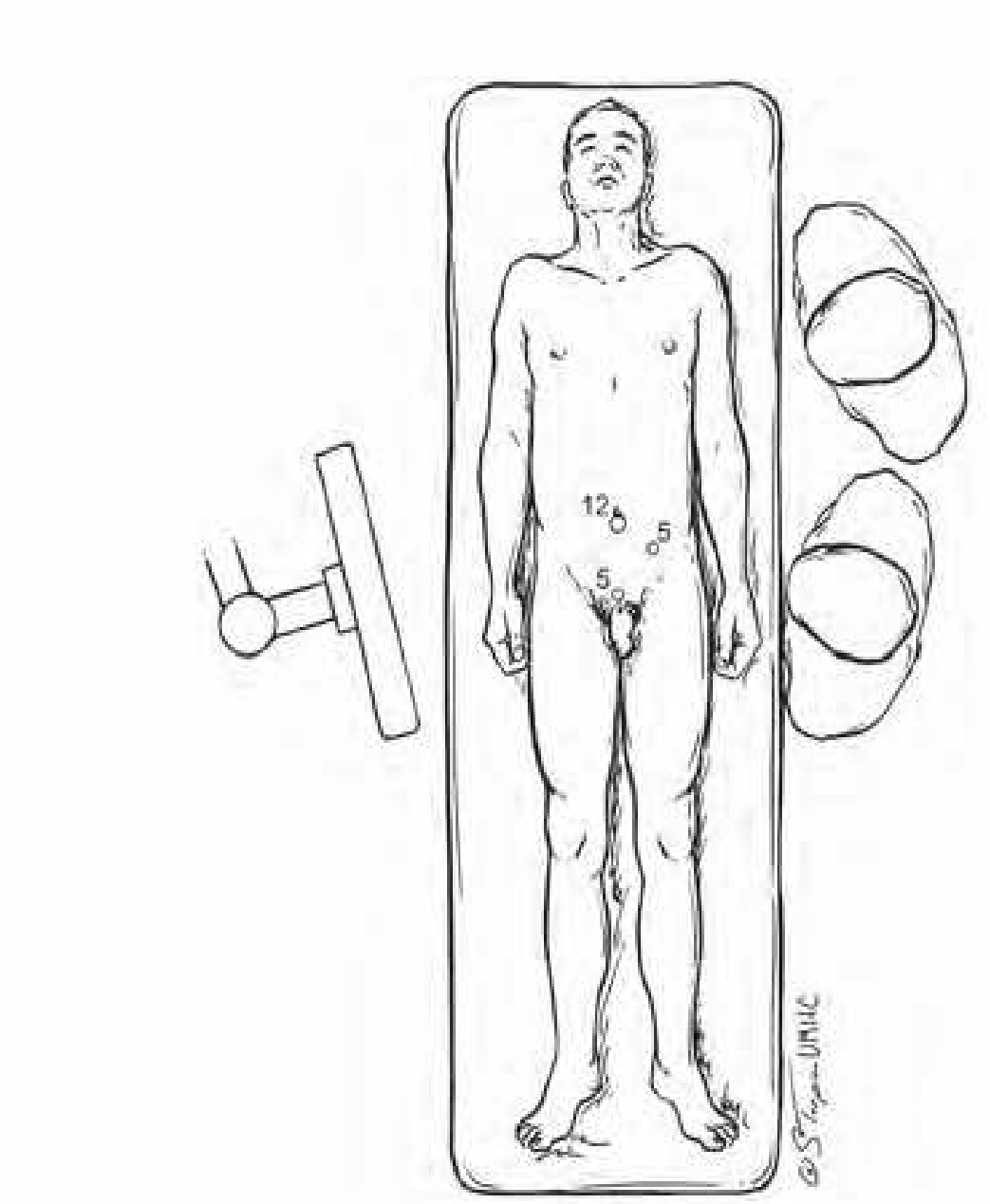


Fig. 1. Patient positioning and port placement for laparoscopic appendectomy.

Figure 11: Port placement

Medical management:

Although appendectomy is the standard treatment for AA, medical management is required in isolated environments where there are no surgical capabilities. Antibiotics can successfully treat acute non-perforated appendicitis.

Hansson and other randomized 369 consecutive adults who were thought to have appendicitis to receive primary antibiotic treatment or surgery. Their conclusion was that adults with appendicitis who did not show obvious signs of intra-abdominal perforation should be treated with antibiotics as a first-line treatment. However, this conclusion had some limitations, and it appears that additional studies are required to establish the role of antibiotics as the primary treatment for non-complicated appendicitis. [(15)]

Complications:

Most appendicitis complications are caused by rupture of the appendix. The hidden location of the appendix, age extremes (young and old), and delayed presentation to medical care are all factors that increase the rate of perforation. In equivocal cases, a brief period of in-hospital observation (less than six hours) may increase diagnostic accuracy and not increase the rate of perforation. [(14)]

Although the patient's symptoms may temporarily come down immediately following the rupture, the diagnosis of a perforated appendix is typically simpler. If peritonitis spreads, the physical examination findings become more apparent, with right lower quadrant tenderness progressing to diffuse abdominal tenderness. The right lower quadrant may feel a mass that is hard to tell apart. [(14)]

Belén Aneiros Castro 1 et al., Impact Of The Appendiceal Position On The Diagnosis And Treatment Of Pediatric Appendicitis. Concluded that The location of the appendix hardly ever affects the clinical signs of appendicitis. (24)

Anna Zacharzewska-Gondek et al., A pictorial essay of the most atypical variants of the vermiform appendix position in computed tomography with their possible clinical implications .Concluded that it is critical to be aware of the unique places where the appendix might occur since appendicitis in an unexpected location can resemble other acute abdominal disorders and delay receiving the right care. (25)

Dr. Irum Sabir Ali. Et al., concluded that with the use of a comprehensive clinical examination, a skilled surgeon can make a clinical diagnosis regarding the location of the appendix. (40)

Huseyin Toprak, Diagnosis of Appendicitis in Patients with Abnormal Position of the Appendix due to Mobile Caecum concluded that if there are atypical clinical features, imaging studies especially CT are helpful in identifying the location of caecum and appendix and avoiding from misdiagnoses (26)

MATERIALS & METHODS:

Source of Data: The source of data will be all t h e patients presenting with acute appendicitis admitted in general surgery wards at KAHER'S Dr.Prabhakar Kore Charitable Hospital and Medical Research Centre, Nehru Nagar, Belagavi.

Method of collection of data:

a) Study design: A Prospective, observational study

b) Duration of data collection: 1 year

c) Study Period: January 2021 to December 2021

d) Sample size: Sample size for experimental study

The minimum sample size formula based on prevalence rate is n = 2

$$n = \frac{z_\alpha{}^2 P(1-P)}{d^2}$$

where P is the percentage of prevalence and d is the percentage likely difference in the prevalence. zα is linked with the level of significance. For 5% level of the significance zα = 1.96. Ref: With P = 72.94% and d = 13% of P = 9.48%, the sample size is 85.

e) Selection criteria

i) **Inclusion criteria**

a) Patients presenting with AA.

b) Patients undergoing open or laparoscopic appendicectomy.

c) Patients that are histopathologically confirmed cases of acute appendicitis.

ii) **Exclusion criteria**

a) Patients with other accompanying abdominal pathologies.

b) Intestinal obstruction.

a) c)Pancreatitis.

b) d)Intestinal perforation.

d) Any non-specific abdominal pain.

e) Pregnant women.

f) Patients who have not given the consent.

Instruments used for data collection- Data collection instrument form.

Clear history of the patients presenting with acute appendicitis is noted using the data collection instrument. USG abdomen and pelvis is done, patients with appendicitis are operated for appendicectomy and the position of the appendix is noted intraoperatively. HPE confirmed cases of appendicitis are only included in the study. The correlation between the clinical presentations and the position of the appendix is established

g) **Statistical Analysis**-

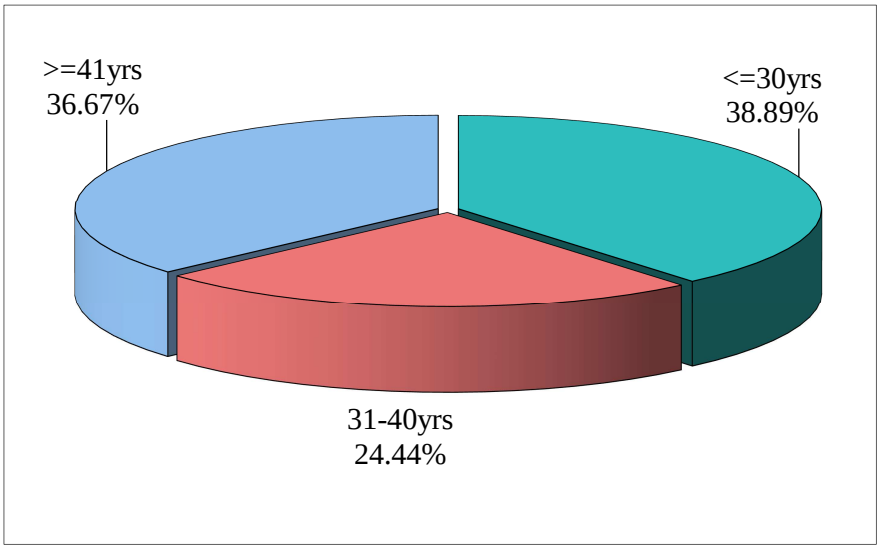
Data will be analysed using statistical software R version 4.0.2 and Microsoft Excel. Continuous data will be represented in mean +- SD form and categorical data will be represented by frequency distribution. To check the dependency between any two categorical variables Chi-square test will be used. To compare mean over groups t-test/ANOVA will be used. To compare distributions over groups MannWhitney test/Kruskal-Wallis test will be used. To find the correlation between two continuous variables Pearson's correlation test/Spearman's correlation test will be used. To check the normality of variables Shapiro-Wilk's test/Quantile-Quantile (QQ) plot will be used. P value less than or equal to 0.05 indicates statistical significance

RESULTS:

Table 1: Age wise distribution of patients

Age groups	No of patients	% of patients
<=30yrs	35	38.89
31-40yrs	22	24.44
>=41yrs	33	36.67
Mean age	38.11	
SD age	15.85	
Total	90	100.00

Figure 12: Age wise distribution of patients

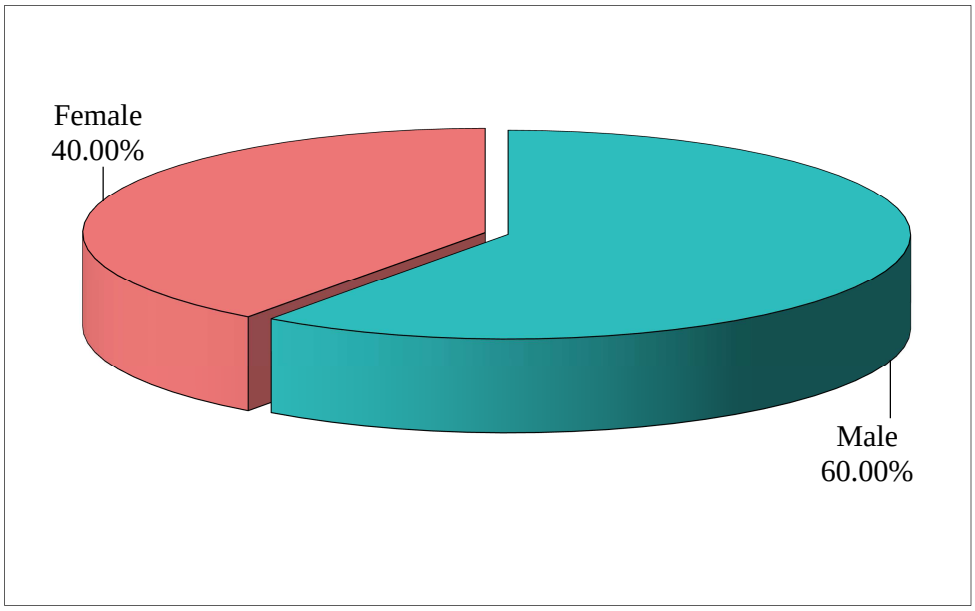


In this study, age of the patients varied from 15 to 80. The maximum number of the patients were in the age group of under 30 years of age.

Table 2: Gender distribution of patients

Gender	No of patients	% of patients
Male	54	60.00
Female	36	40.00
Total	90	100.00

Figure 13: Gender distribution of patients

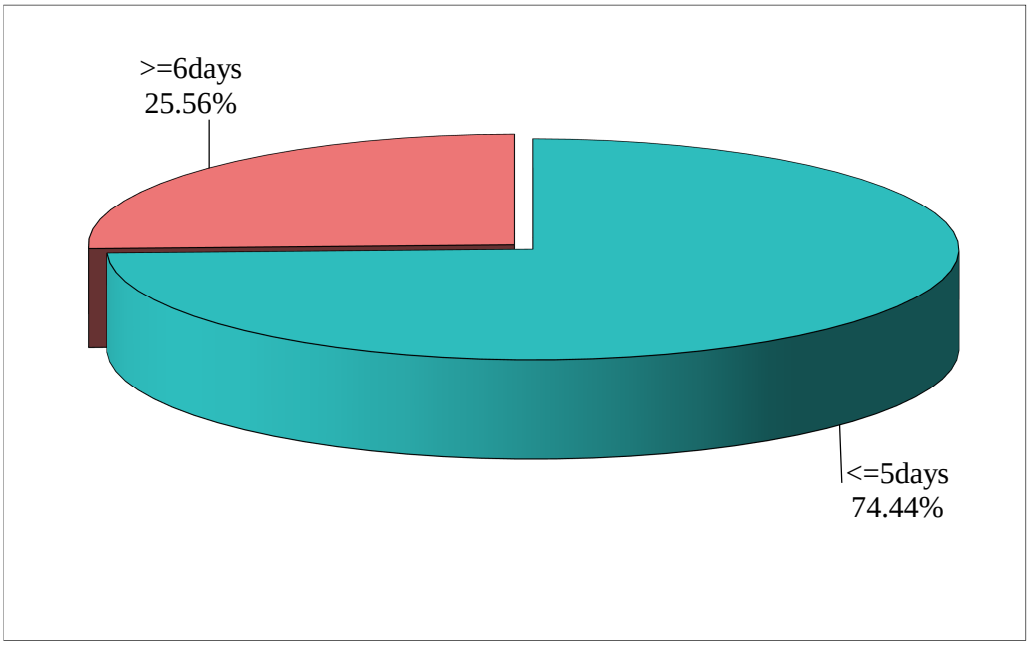


In this study 60% of the patients were males and 40% of them were females.

Table 3: Duration of hospital stay (in days) wise distribution of patients

Duration of hospital stay (in days)	No of patients	% of patients
<=5days	67	74.44
>=6days	23	25.56
Mean	4.87	
SD	1.72	
Total	90	100.00

Figure 14: Duration of hospital stay (in days) wise distribution of patients



In the current study, 74.44% of the patients had a hospital stay of less than 5 days.

Table 4: Status of various symptoms in the study

Symptoms	Present	%	Absent	%
Vomiting	52	57.78	38	42.22
Pain radiating to loin	36	40.00	54	60.00
Pain in right illiac fossa	64	71.11	26	28.89
Loose stools	14	15.56	76	84.44

Figure 15: Status of various symptoms in the study

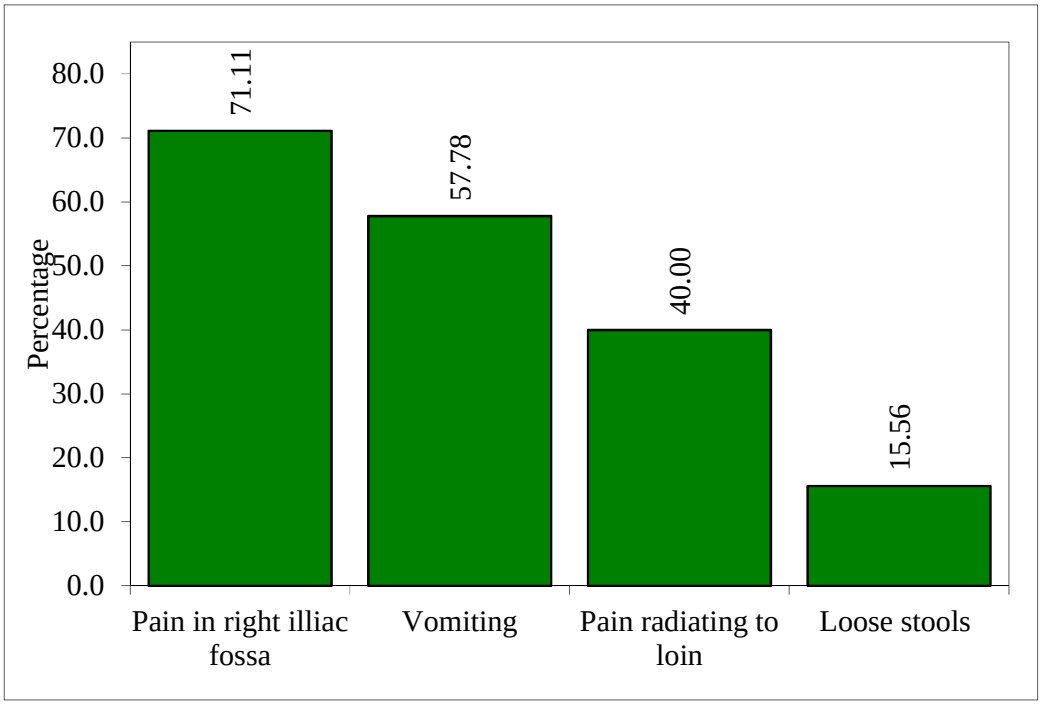


Table 5: status of various signs in the study

Signs	Yes	%	No	%
Rovsing's sign	58	64.44	32	35.56
Cope psoas test	41	45.56	49	54.44
Obturator test	16	17.78	74	82.22
Baldwing's test	41	45.56	49	54.44

Figure 16: Status of various signs in the study

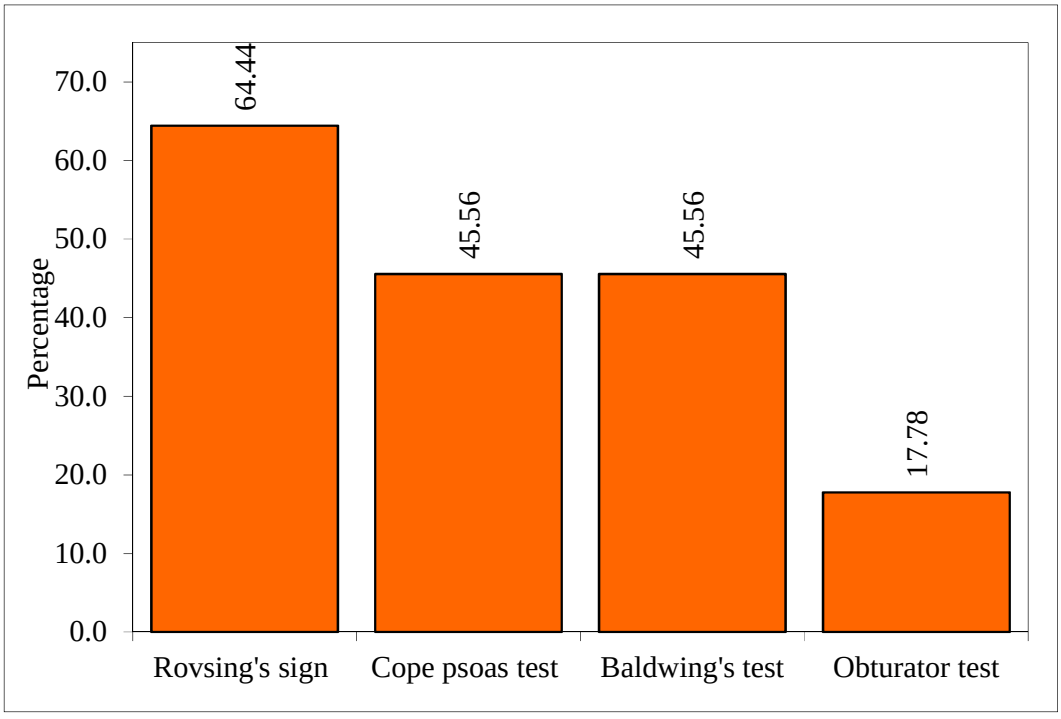
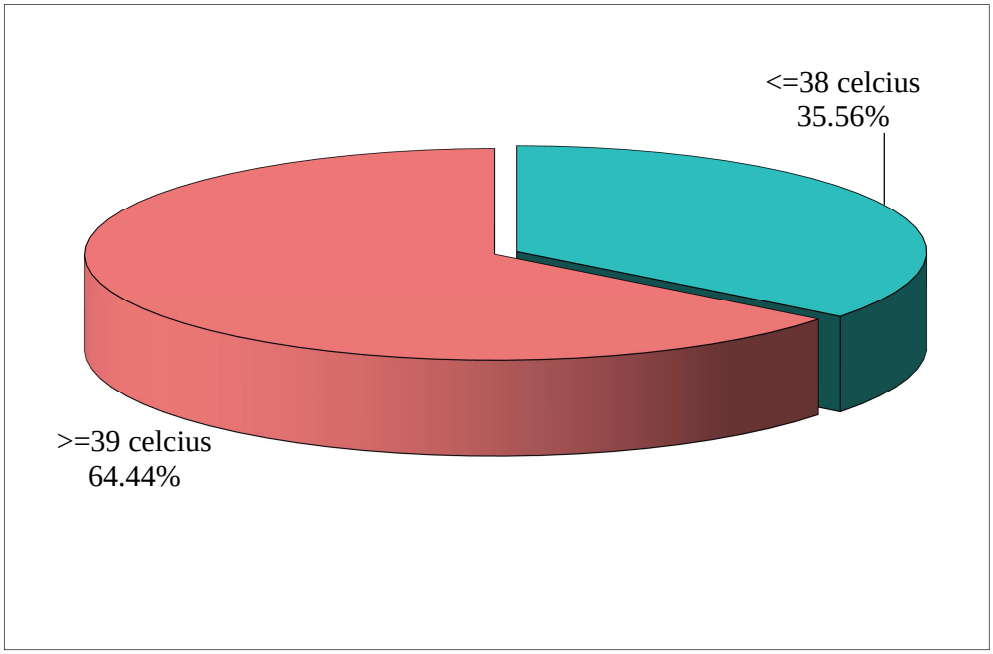


Table 6: Status of Temperature in (CELCIUS)

Temperature	Number	Percent
<=38 celcius	32	35.56
>=39 celcius	58	64.44
Total	90	100.00
Mean	38.11	
SD	0.44	

Figure 17: Status of Temperature in (CELCIUS)

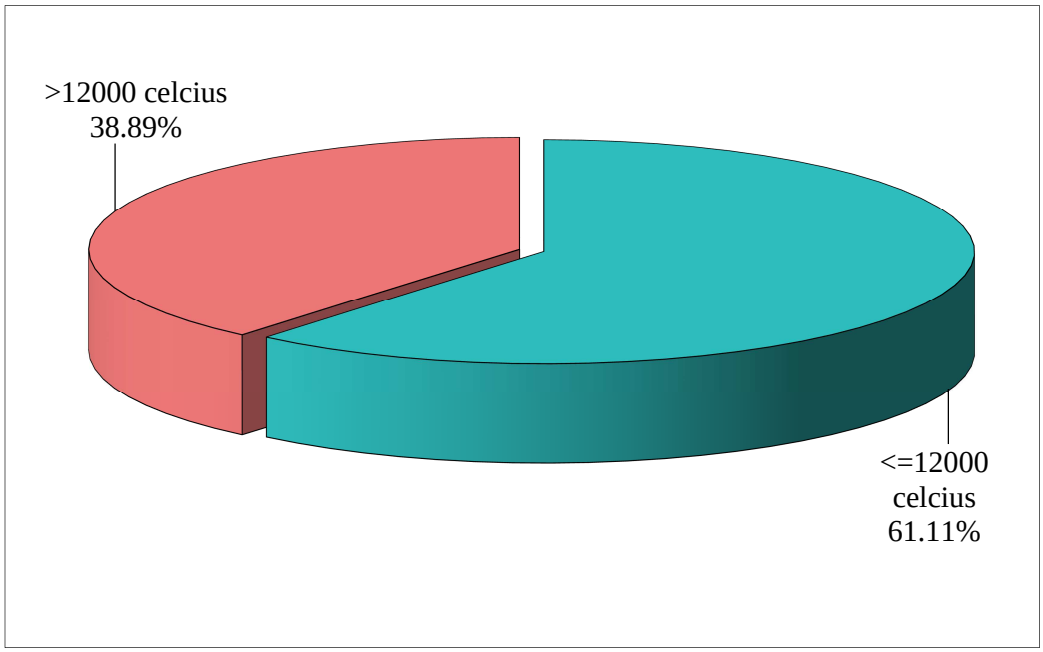


In this study about 64.44% of patients presented with fever, whereas the rest did not.

Table 7: Status of TLC

TLC	Number	Percent
<=12000 celcius	55	61.11
>12000 celcius	35	38.89
Total	90	100.00
Mean	13608.3	
SD	4053.7	

Figure 18: Status of TLC

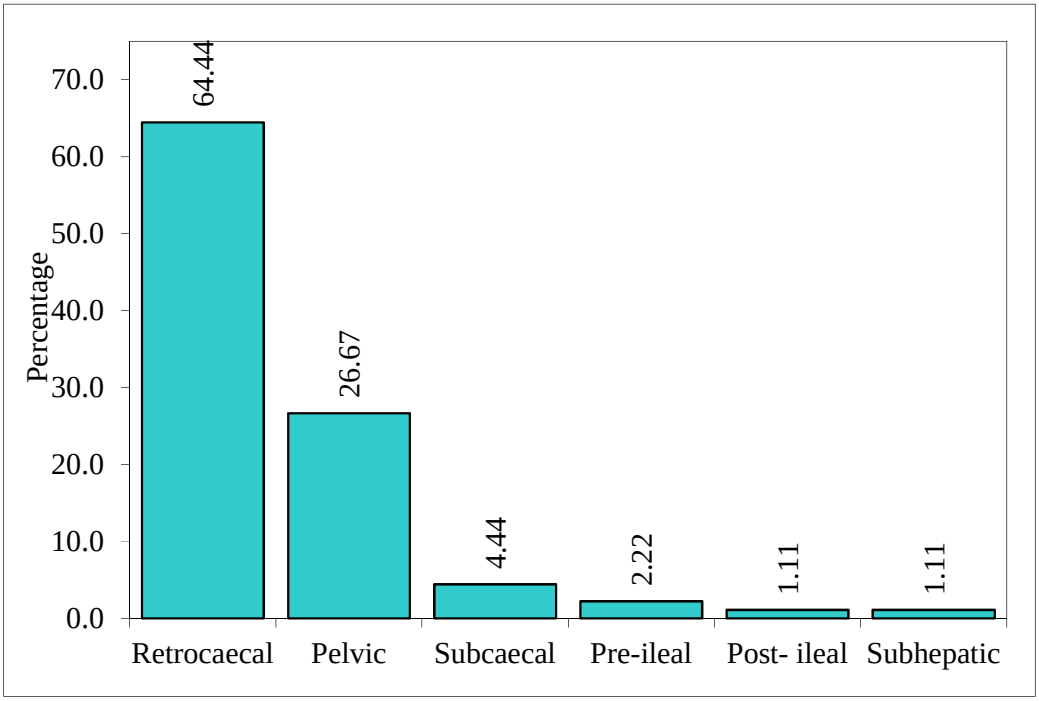


In this study 38.89% of patients had leucocytosis.

Table 8: Status of positions of appendix in the study

Positions of appendix	Yes	%	No	%
Retrocaecal	58	64.44	32	35.56
Pelvic	24	26.67	66	73.33
Pre-ileal	2	2.22	88	97.78
Post- ileal	1	1.11	89	98.89
Subhepatic	1	1.11	90	100.00
Subcaecal	4	4.44	88	97.78

Figure 19: Status of positions of appendix in the study



In the current study, 64.44% of cases had retrocecal position of appendix. Whereas 26.67% of cases had pelvic position of the appendix.

Table 9: Association between age groups and positions of appendix

Positions	<=30yrs	%	31-40yrs	%	>=41yrs	%	Total	%	p-value
Retrocaecal									
No	13	40.63	8	25.00	11	34.38	32	35.56	0.9440
Yes	22	37.93	14	24.14	22	37.93	58	64.44	
Pelvic									
No	26	39.39	16	24.24	24	36.36	66	73.33	0.9870
Yes	9	37.50	6	25.00	9	37.50	24	26.67	
Pre-ileal									
No	34	38.64	21	23.86	33	37.50	88	97.78	0.5060
Yes	1	50.00	1	50.00	0	0.00	2	2.22	
Post- ileal									
No	35	39.33	22	24.72	32	35.96	89	98.89	0.4180
Yes	0	0.00	0	0.00	1	100.0	1	1.11	
Subhepatic									
No	34	38.20	22	24.72	33	37.08	89	98.89	0.4520
Yes	1	100.0	0	0.00	0	0.00	1	1.11	
Subcaecal									
No	33	38.37	21	24.42	32	37.21	86	95.56	0.8660
Yes	2	50.00	1	25.00	1	25.00	4	4.44	
Total	35	38.89	22	24.44	33	36.67	90	100.0	

Figure 20: Association between age groups and positions of appendix

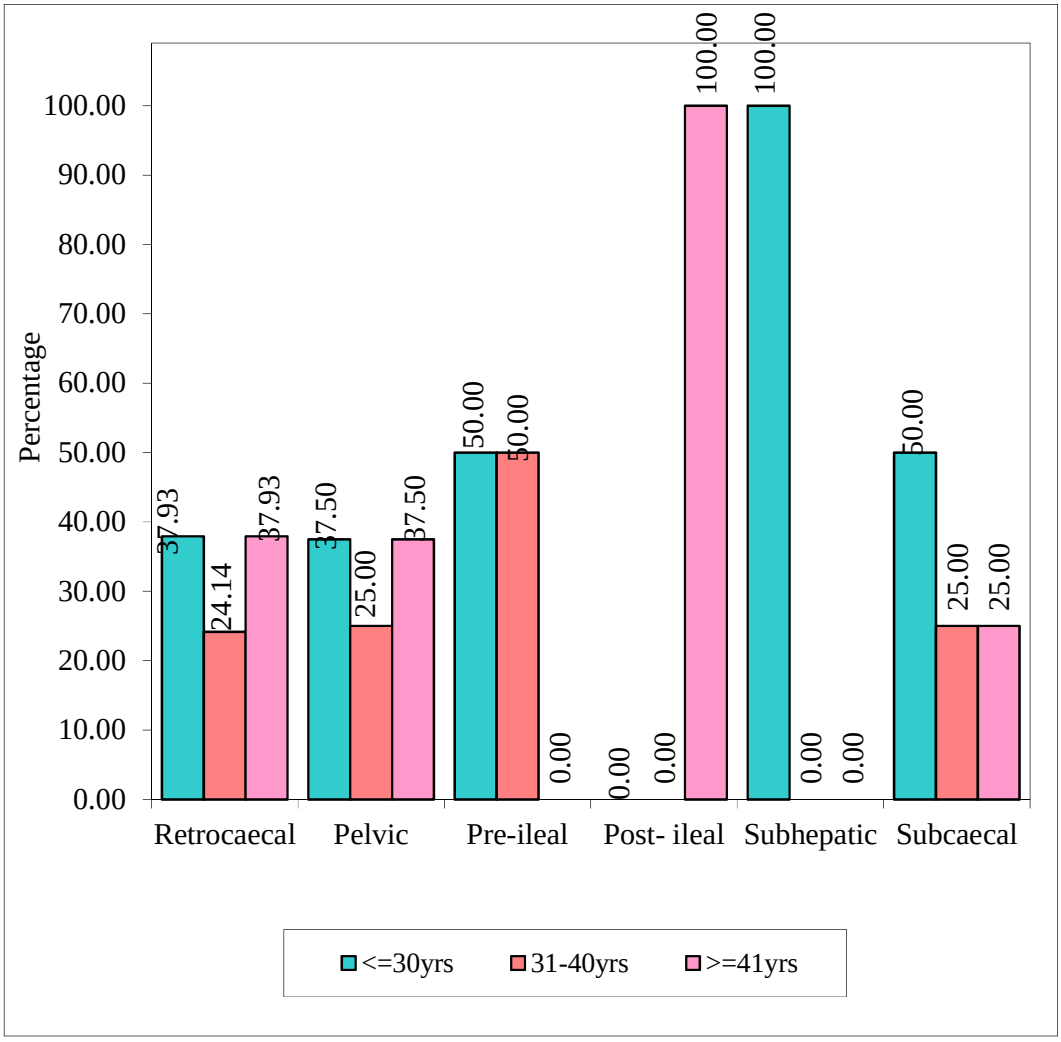


Table 10: Association between gender and positions of appendix

Positions	Male	%	Female	%	Total	%	p-value
Retrocaecal							
No	19	35.19	13	36.11	32	35.56	0.9280
Yes	35	64.81	23	63.89	58	64.44	
Pelvic							
No	40	74.07	26	72.22	66	73.33	0.8460
Yes	14	25.93	10	27.78	24	26.67	
Pre-ileal							
No	52	96.30	36	100.00	88	97.78	0.2430
Yes	2	3.70	0	0.00	2	2.22	
Post- ileal							
No	54	100.00	35	97.22	89	98.89	-
Yes	0	0.00	1	2.78	1	1.11	
Subhepatic						0.00	
No	54	100.00	35	97.22	89	98.89	-
Yes	0	0.00	1	2.78	1	1.11	
Subcaecal							
No	51	94.44	35	97.22	86	95.56	0.5310
Yes	3	5.56	1	2.78	4	4.44	
Total	54	100.00	36	100.00	90	100.00	

Figure 21: Association between gender and positions of appendix

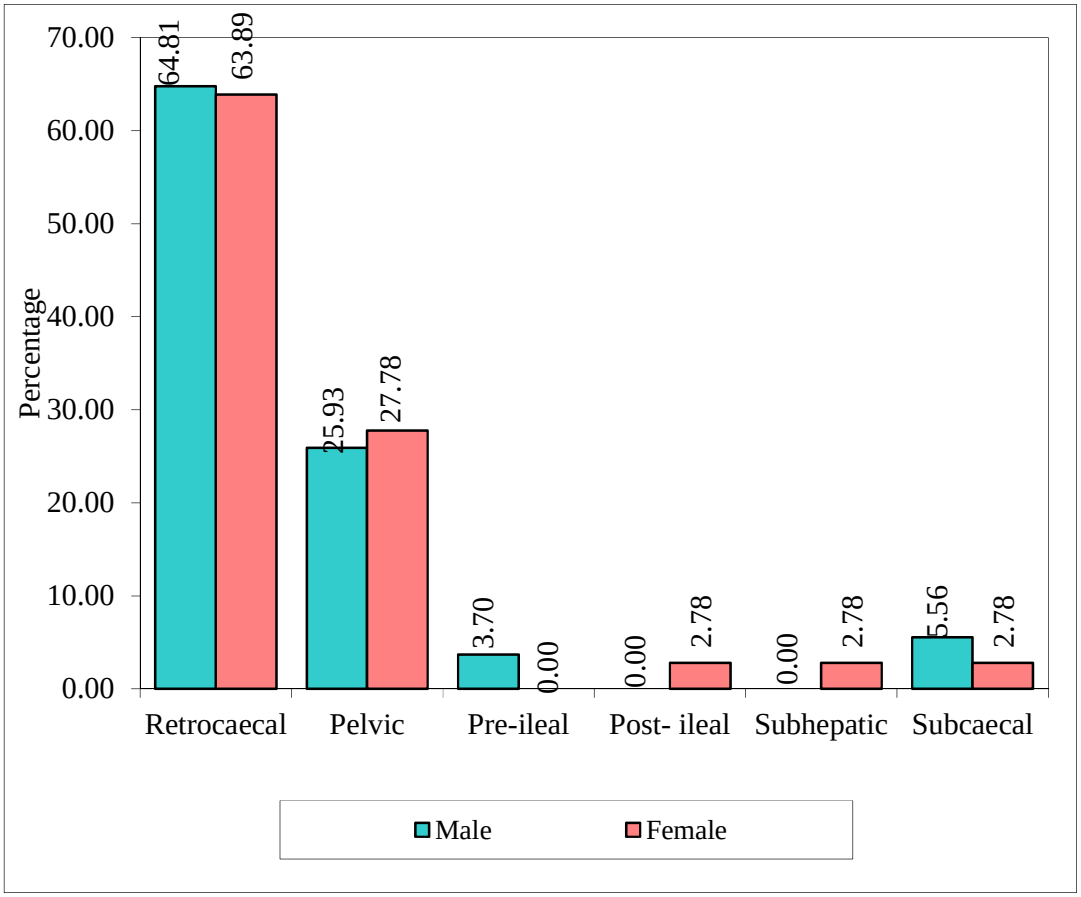
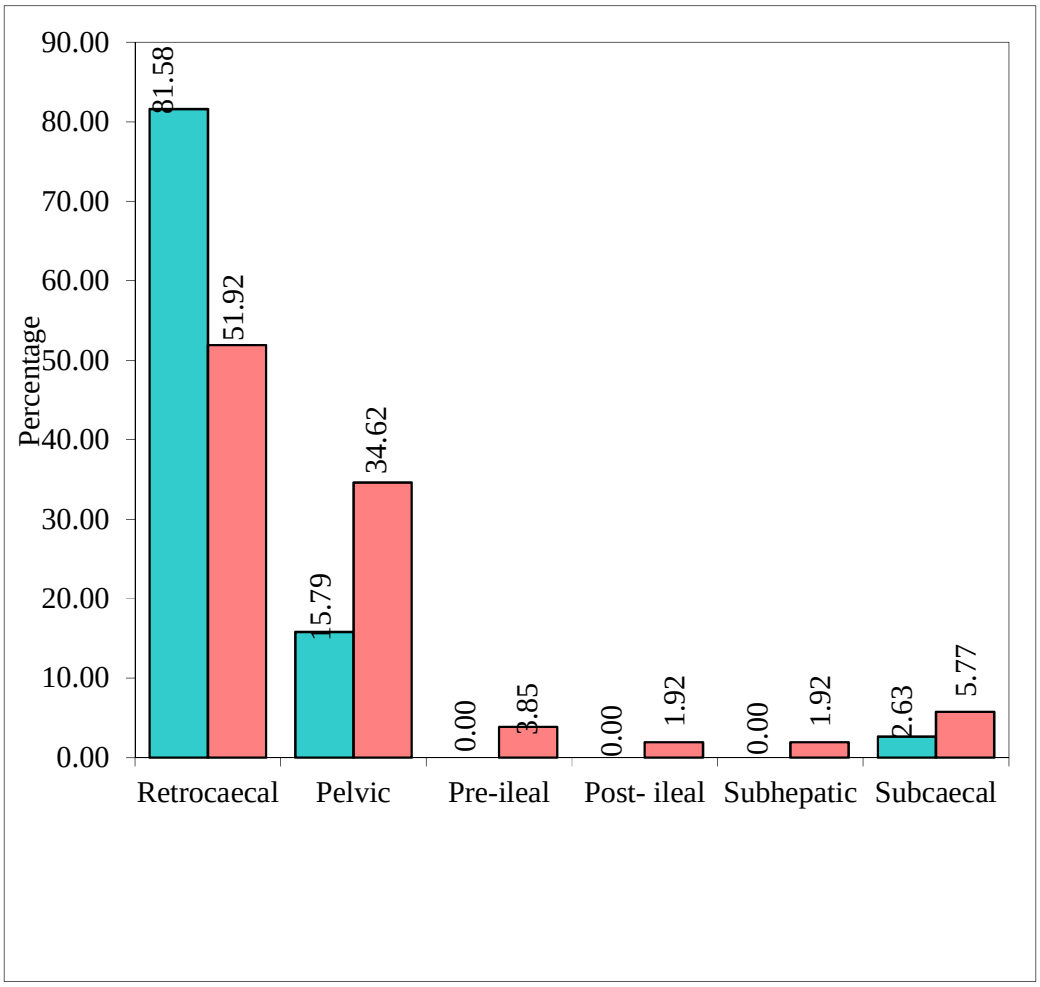


Table 11: Association between status of symptom of vomiting and positions of appendix

Positions	No vomiting	%	Yes vomiting	%	Total	%	p-value
Retrocaecal							
No	7	18.42	25	48.08	32	35.56	0.0040*
Yes	31	81.58	27	51.92	58	64.44	
Pelvic							
No	32	84.21	34	65.38	66	73.33	0.0460*
Yes	6	15.79	18	34.62	24	26.67	
Pre-ileal							
No	38	100.0	50	96.15	88	97.78	0.2210
Yes	0	0.00	2	3.85	2	2.22	
Post- ileal							
No	38	100.0	51	98.08	89	98.89	-
Yes	0	0.00	1	1.92	1	1.11	
Subhepatic							
No	38	100.0	51	98.08	89	98.89	-
Yes	0	0.00	1	1.92	1	1.11	
Subcaecal							
No	37	97.37	49	94.23	86	95.56	0.4760
Yes	1	2.63	3	5.77	4	4.44	
Total	38	100.0	52	100.00	90	100.00	

Figure 22: Association between status of symptom of vomiting and positions of appendix



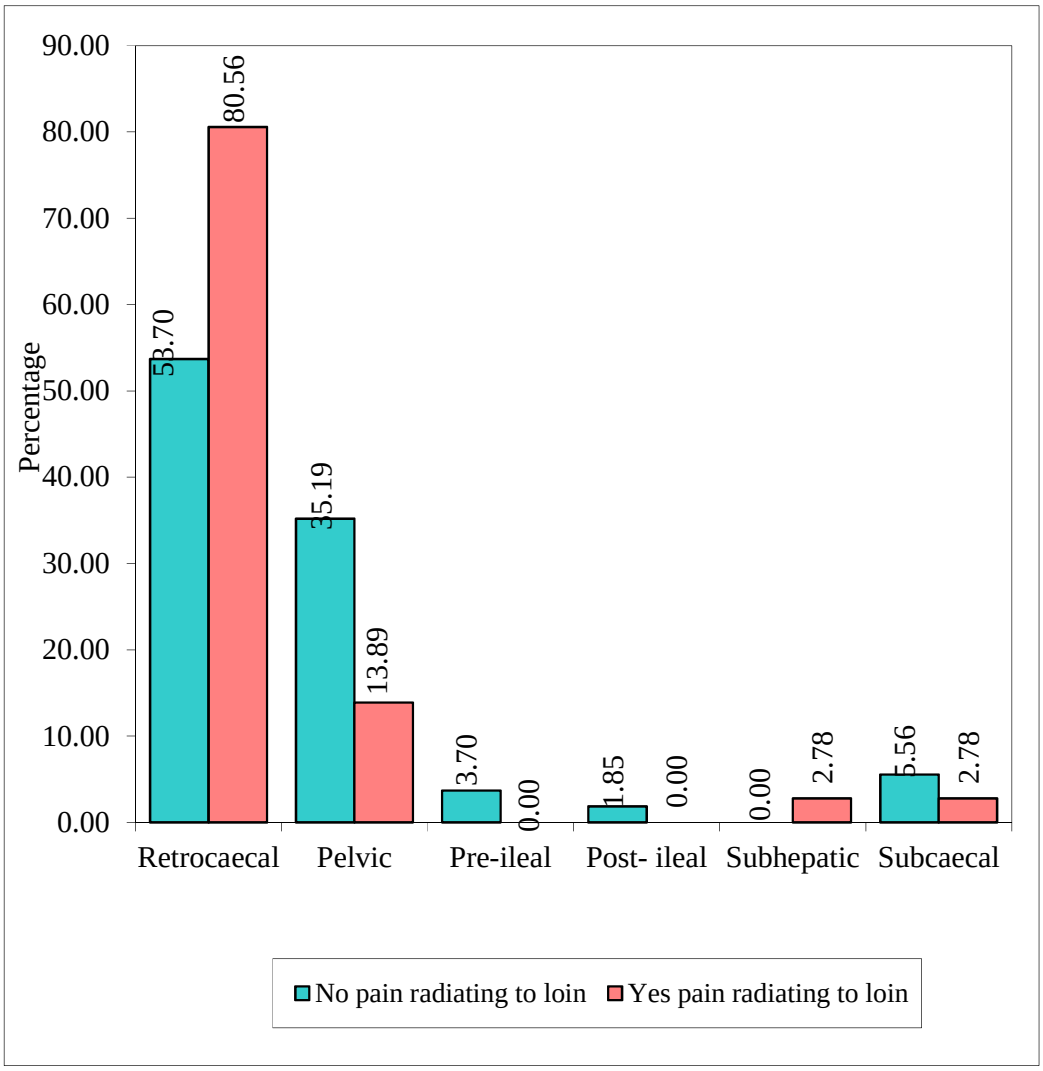
In the current study, there was no significant association between vomitings and any position of appendix.

Table 12: Association between status of symptom of pain radiating to loin and positions of appendix

Positions	No pain radiating to loin	%	Yes pain radiating to loin	%	Total	%	p-value
Retrocaecal							
No	25	46.30	7	19.44	32	35.56	0.0090*
Yes	29	53.70	29	80.56	58	64.44	
Pelvic							
No	35	64.81	31	86.11	66	73.33	0.0250*
Yes	19	35.19	5	13.89	24	26.67	
Pre-ileal							
No	52	96.30	36	100.00	88	97.78	0.2430
Yes	2	3.70	0	0.00	2	2.22	
Post- ileal							
No	53	98.15	36	100.00	89	98.89	0.4120
Yes	1	1.85	0	0.00	1	1.11	
Subhepatic							
No	54	100.0	35	97.22	89	98.89	0.2180
Yes	0	0.00	1	2.78	1	1.11	
Subcaecal							
No	51	94.44	35	97.22	86	95.56	0.5310
Yes	3	5.56	1	2.78	4	4.44	
Total	54	100.0	36	100.00	90	100.00	

*$p<0.05$

Figure 23: Association between status of symptom of pain radiating to loin and positions of appendix



In the current study, pain radiating to the loin was significantly associated with the retrocecal position of appendix.

Table 13: Association between status of symptom of Pain in right iliac fossa and positions of appendix

Positions	No right illiac fossa	%	Yes right illiac fossa	%	Total	%	p-value
Retrocaecal							
No	3	11.54	29	45.31	32	35.56	0.0020*
Yes	23	88.46	35	54.69	58	64.44	
Pelvic							
No	23	88.46	43	67.19	66	73.33	0.0390*
Yes	3	11.54	21	32.81	24	26.67	
Pre-ileal							
No	26	100.0	62	96.88	88	97.78	0.3620
Yes	0	0.00	2	3.13	2	2.22	
Post- ileal							
No	26	100.0	63	98.44	89	98.89	0.5220
Yes	0	0.00	1	1.56	1	1.11	
Subhepatic							
No	26	100.0	63	98.44	89	98.89	0.5220
Yes	0	0.00	1	1.56	1	1.11	
Subcaecal							
No	26	100.0	60	93.75	86	95.56	0.1920
Yes	0	0.00	4	6.25	4	4.44	
Total	26	100.0	64	100.00	90	100.00	

*$p<0.05$

In the current study, pain in the right iliac fossa was significantly associated with retrocecal and pelvic positions of the appendix.

Figure 24: Association between status of symptom of Pain in right illiac fossa and positions of appendix

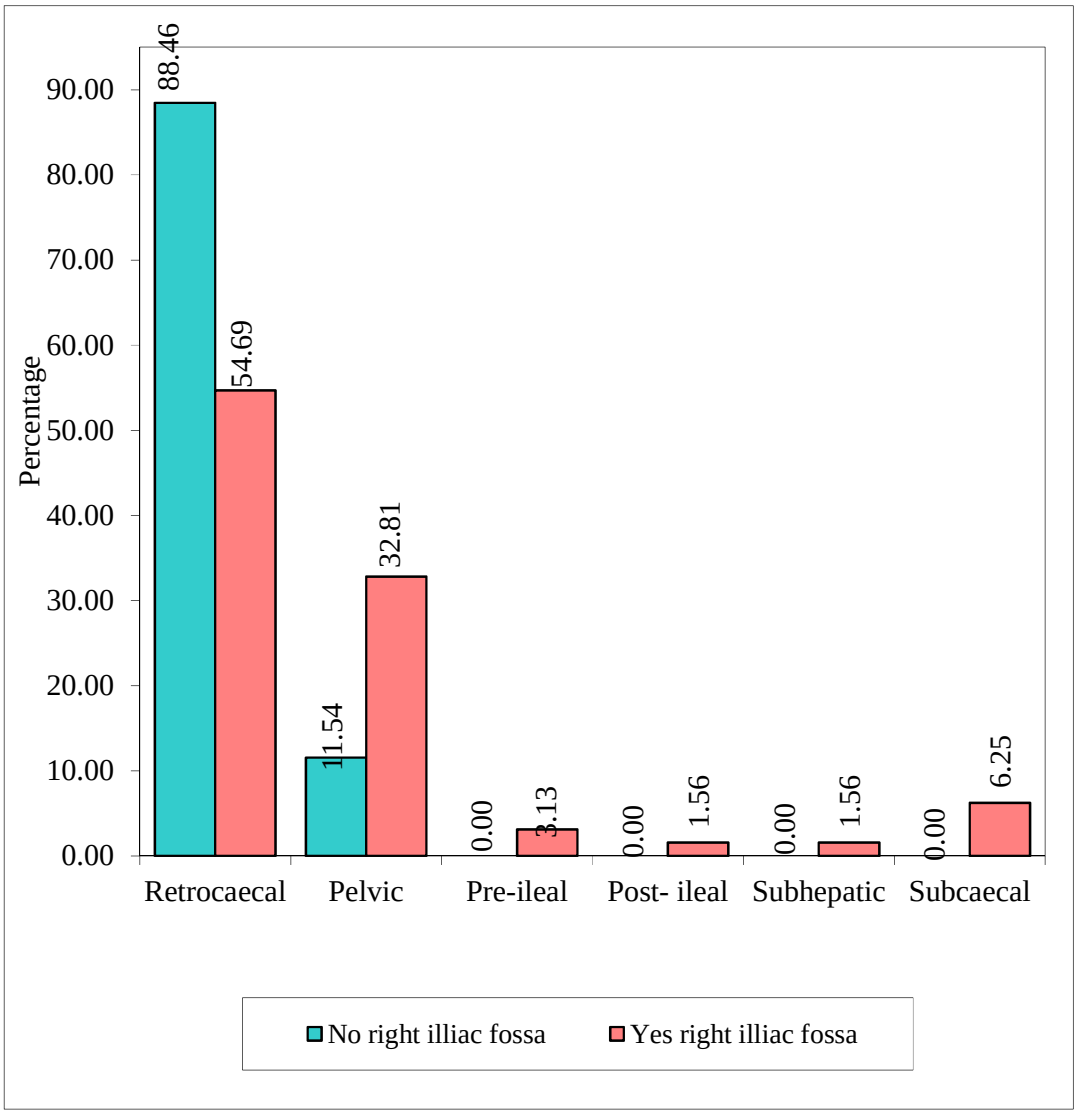
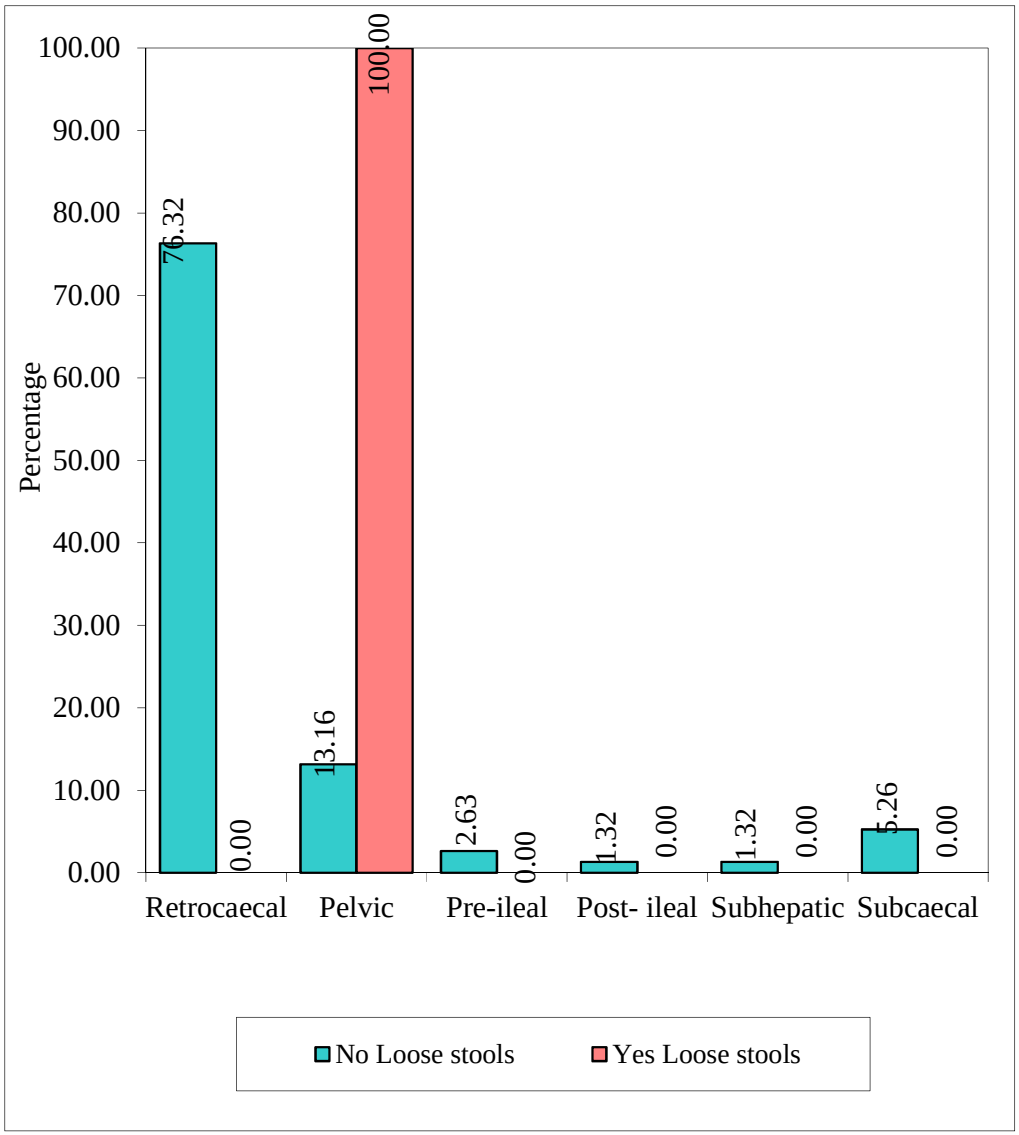


Table 14: Association between status of symptom of Loose stools and positions of appendix

Positions	No Loose stools	%	Yes Loose stools	%	Total	%	p-value
Retrocaecal							
No	18	23.68	14	100.00	32	35.56	0.0001*
Yes	58	76.32	0	0.00	58	64.44	
Pelvic							
No	66	86.84	0	0.00	66	73.33	0.0001*
Yes	10	13.16	14	100.00	24	26.67	
Pre-ileal							
No	74	97.37	14	100.00	88	97.78	0.5390
Yes	2	2.63	0	0.00	2	2.22	
Post- ileal							
No	75	98.68	14	100.00	89	98.89	1.0000
Yes	1	1.32	0	0.00	1	1.11	
Subhepatic							
No	75	98.68	14	100.00	89	98.89	1.0000
Yes	1	1.32	0	0.00	1	1.11	
Subcaecal							
No	72	94.74	14	100.00	86	95.56	0.3800
Yes	4	5.26	0	0.00	4	4.44	
Total	76	100.0	14	100.00	90	100.00	

*$p<0.05$

Figure 25: Association between status of symptom of Loose stools and positions of appendix

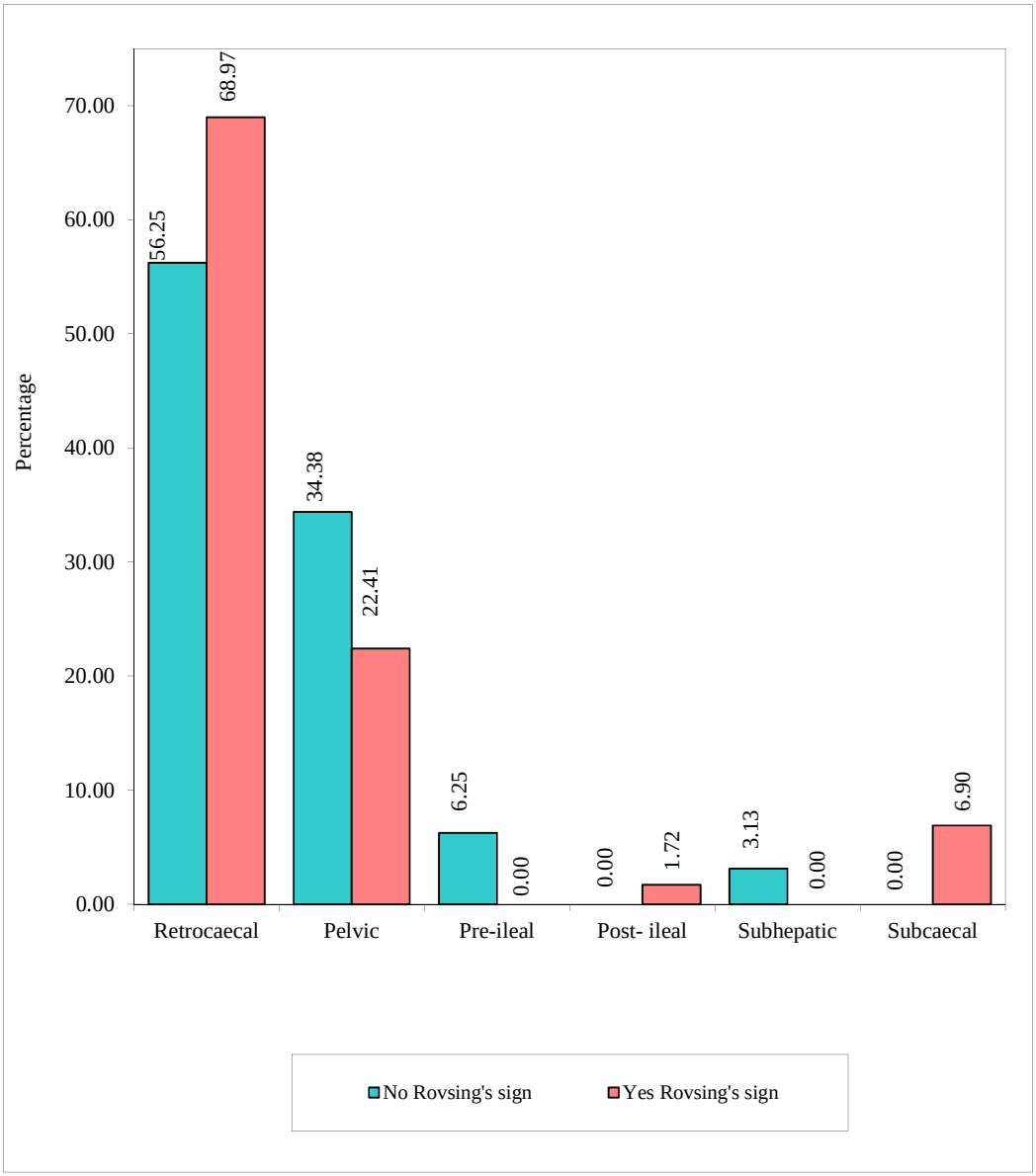


In the current study, loose stools were significantly associated with the pelvic position of appendix.

Table 15: Association between status of Rovsing's sign and positions of appendix

Positions	No Rovsing's sign	%	Yes Rovsing's sign	%	Total	%	p-value
Retrocaecal							
No	14	43.75	18	31.03	32	35.56	0.2280
Yes	18	56.25	40	68.97	58	64.44	
Pelvic							
No	21	65.63	45	77.59	66	73.33	0.2190
Yes	11	34.38	13	22.41	24	26.67	
Pre-ileal							
No	30	93.75	58	100.00	88	97.78	0.0540
Yes	2	6.25	0	0.00	2	2.22	
Post- ileal							
No	32	100.0	57	98.28	89	98.89	1.0000
Yes	0	0.00	1	1.72	1	1.11	
Subhepatic							
No	31	96.88	58	100.00	89	98.89	1.0000
Yes	1	3.13	0	0.00	1	1.11	
Subcaecal							
No	32	100.0	54	93.10	86	95.56	0.1290
Yes	0	0.00	4	6.90	4	4.44	
Total	32	100.0	58	100.00	90	100.00	

Figure 26: Association between status of Rovsing's sign and positions of appendix



In the current study there was no significant association of Rovsing's sign with any position of the appendix.

Table 16: Association between status of Temperature in (celcius) and positions of appendix

Positions	<=38 celcius	%	>=39 celcius	%	Total	%	p-value
Retrocaecal							
No	12	37.50	20	34.48	32	35.56	0.7750
Yes	20	62.50	38	65.52	58	64.44	
Pelvic							
No	23	71.88	43	74.14	66	73.33	0.8160
Yes	9	28.13	15	25.86	24	26.67	
Pre-ileal							
No	31	96.88	57	98.28	88	97.78	1.0000
Yes	1	3.13	1	1.72	2	2.22	
Post- ileal							
No	32	100.0	57	98.28	89	98.89	1.0000
Yes	0	0.00	1	1.72	1	1.11	
Subhepatic							
No	31	96.88	58	100.00	89	98.89	1.0000
Yes	1	3.13	0	0.00	1	1.11	
Subcaecal							
No	31	96.88	55	94.83	86	95.56	0.6520
Yes	1	3.13	3	5.17	4	4.44	
Total	32	100.0	58	100.00	90	100.00	

Figure 27: Association between status of Temperature in (celcius) and positions of appendix

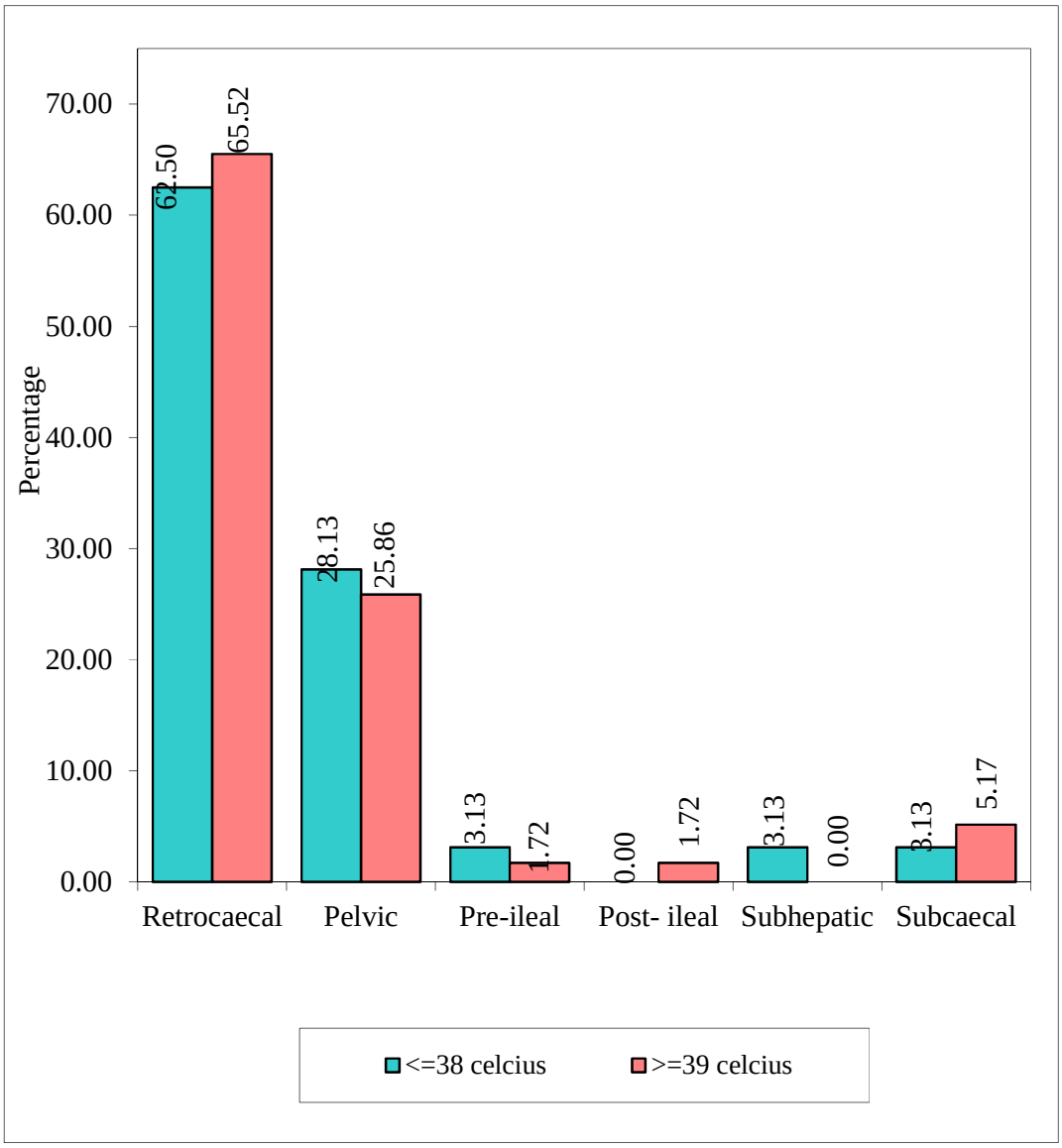


Table 17: Association between status of Cope psoas test and positions of appendix

Positions	Negative Cope psoas	%	Positive Cope psoas	%	Total	%	p-value
Retrocaecal							
No	32	65.31	0	0.00	32	35.56	0.0001 *
Yes	17	34.69	41	100.00	58	64.44	
Pelvic							
No	25	51.02	41	100.00	66	73.33	0.0001 *
Yes	24	48.98	0	0.00	24	26.67	
Pre-ileal							
No	47	95.92	41	100.00	88	97.78	1.0000
Yes	2	4.08	0	0.00	2	2.22	
Post- ileal							
No	48	97.96	41	100.00	89	98.89	1.0000
Yes	1	2.04	0	0.00	1	1.11	
Subhepatic							
No	48	97.96	41	100.00	89	98.89	1.0000
Yes	1	2.04	0	0.00	1	1.11	
Subcaecal							
No	45	91.84	41	100.00	86	95.56	0.0610
Yes	4	8.16	0	0.00	4	4.44	
Total	49	100.0	41	100.00	90	100.00	

*$p<0.05$

In the current study retrocecal position showed significant association with cope psoas test.

Figure 28: Association between status of Cope psoas test and positions of appendix

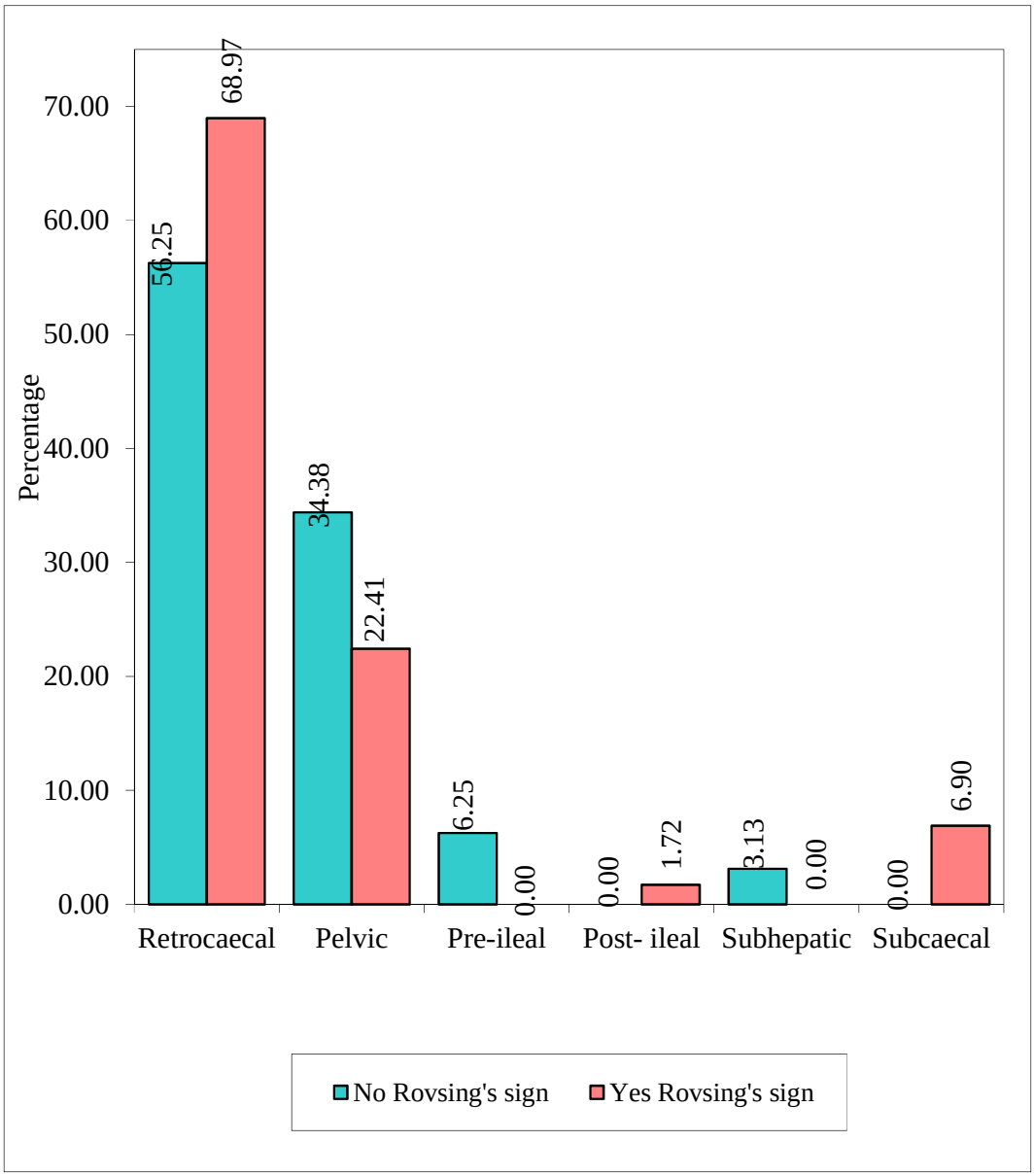
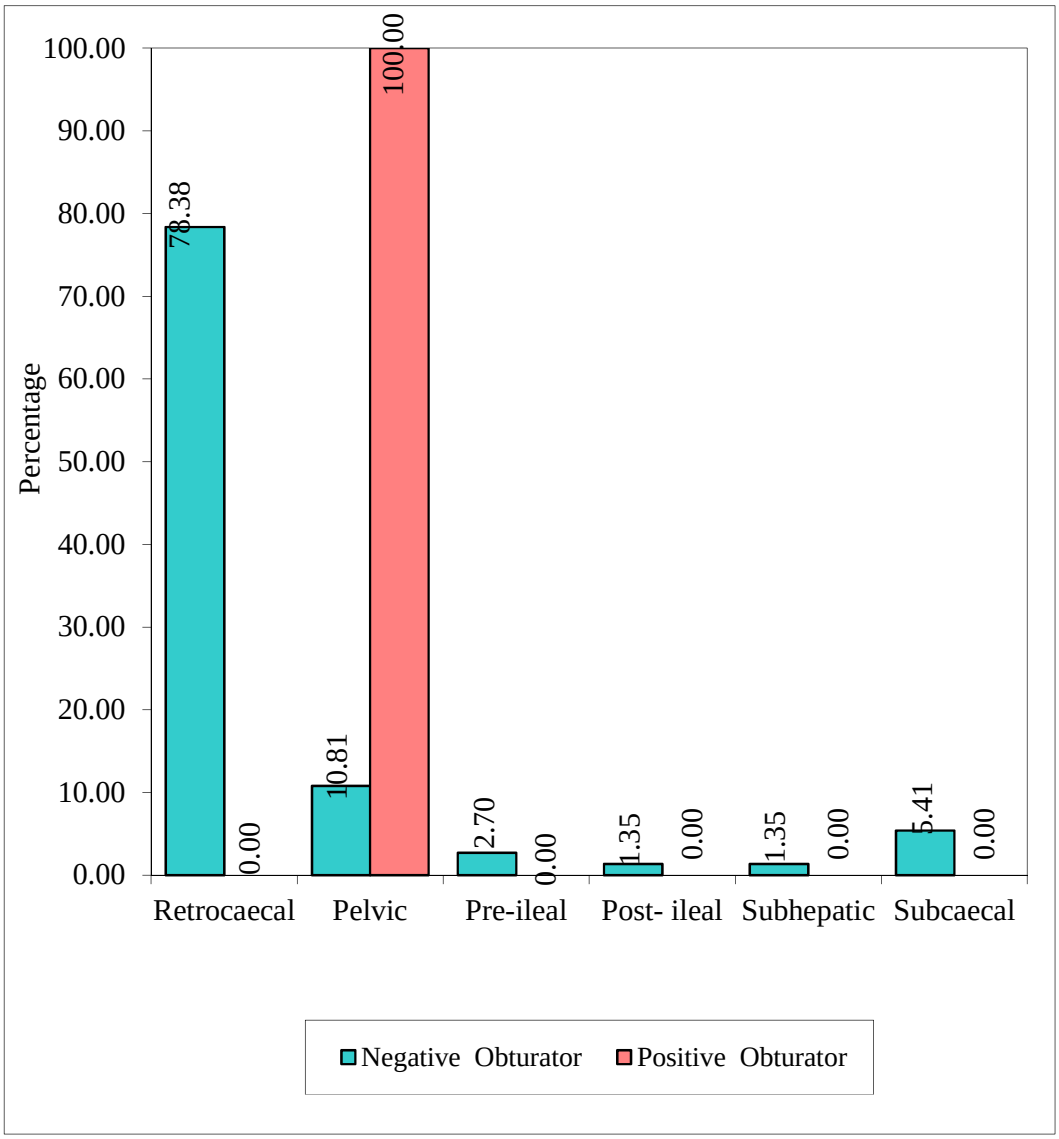


Table 18: Association between status of Obturator test and positions of appendix

Positions	Negative Obturator	%	Positive Obturator	%	Total	%	p-value
Retrocaecal							
No	16	21.62	16	100.00	32	35.56	0.0001 *
Yes	58	78.38	0	0.00	58	64.44	
Pelvic							
No	66	89.19	0	0.00	66	73.33	0.0001 *
Yes	8	10.81	16	100.00	24	26.67	
Pre-ileal							
No	72	97.30	16	100.00	88	97.78	0.5060
Yes	2	2.70	0	0.00	2	2.22	
Post- ileal							
No	73	98.65	16	100.00	89	98.89	1.0000
Yes	1	1.35	0	0.00	1	1.11	
Subhepatic							
No	73	98.65	16	100.00	89	98.89	1.0000
Yes	1	1.35	0	0.00	1	1.11	
Subcaecal							
No	70	94.59	16	100.00	86	95.56	0.3410
Yes	4	5.41	0	0.00	4	4.44	
Total	74	100.0	16	100.00	90	100.00	

*$p<0.05$

Figure 29: Association between status of Obturator test and positions of appendix



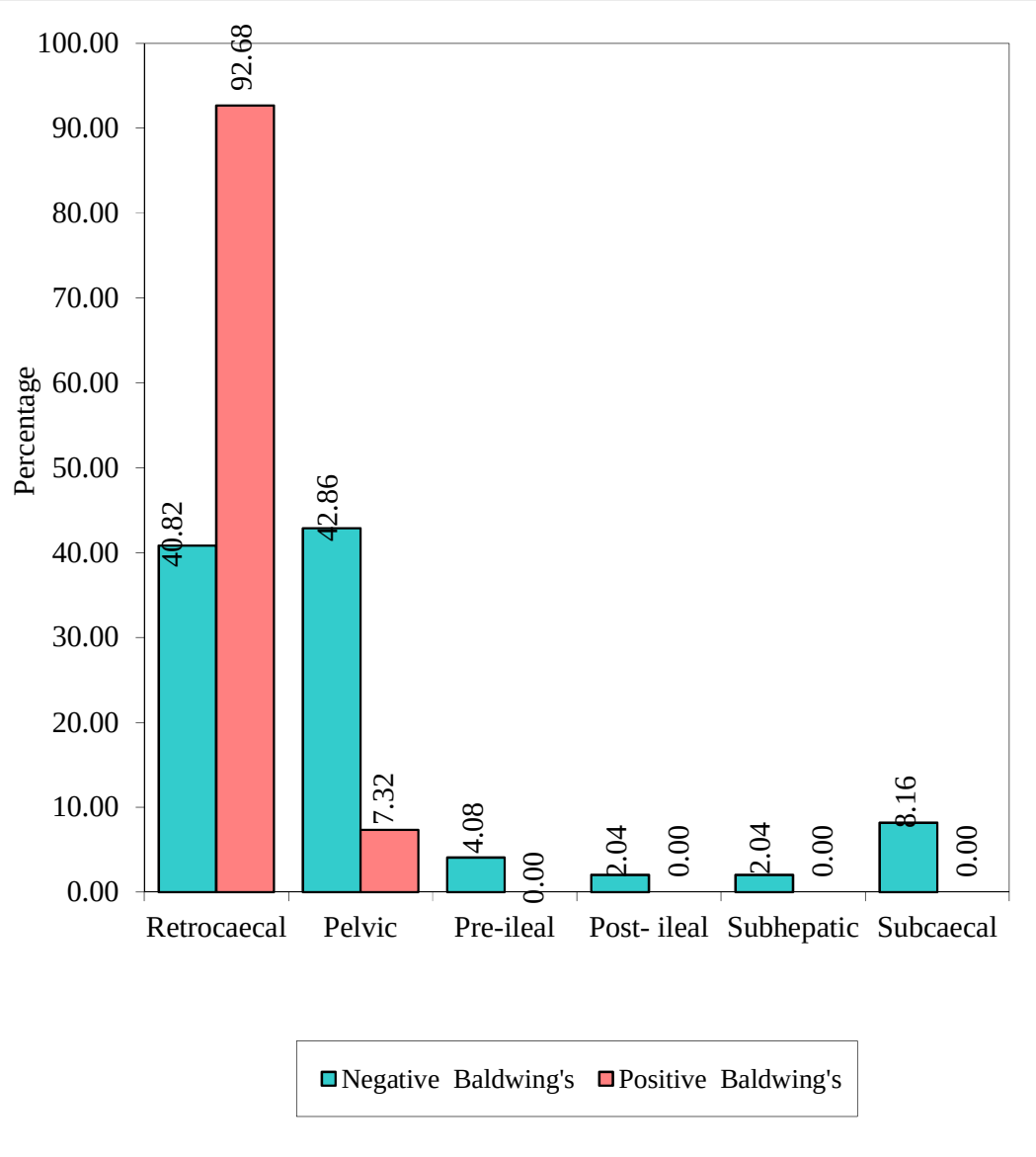
In the current study pelvic position showed a significant association with obturator test.

Table 19: Association between status of Baldwing's test and positions of appendix

Positions	Negative Baldwing's	%	Positive Baldwing's	%	Total	%	p-value
Retrocaecal							
No	29	59.18	3	7.32	32	35.56	0.0001 *
Yes	20	40.82	38	92.68	58	64.44	
Pelvic							
No	28	57.14	38	92.68	66	73.33	0.0001 *
Yes	21	42.86	3	7.32	24	26.67	
Pre-ileal							
No	47	95.92	41	100.00	88	97.78	0.1910
Yes	2	4.08	0	0.00	2	2.22	
Post- ileal							
No	48	97.96	41	100.00	89	98.89	1.0000
Yes	1	2.04	0	0.00	1	1.11	
Subhepatic							
No	48	97.96	41	100.00	89	98.89	1.0000
Yes	1	2.04	0	0.00	1	1.11	
Subcaecal							
No	45	91.84	41	100.00	86	95.56	0.0610
Yes	4	8.16	0	0.00	4	4.44	
Total	49	100.0	41	100.00	90	100.00	

*$p<0.05$

Figure 30: Association between status of Baldwing's test and positions of appendix



In the current study, retrocecal position showed significant association with Baldwing's test.

Table 20: Association between status of TLC and positions of appendix

Positions	>12000	%	<12000	%	Total	%	p-value
Retrocaecal							
No	18	32.73	14	40.00	32	35.56	0.4820
Yes	37	67.27	21	60.00	58	64.44	
Pelvic							
No	43	78.18	23	65.71	66	73.33	0.1920
Yes	12	21.82	12	34.29	24	26.67	
Pre-ileal							
No	54	98.18	34	97.14	88	97.78	0.7440
Yes	1	1.82	1	2.86	2	2.22	
Post- ileal							
No	54	98.18	35	100.00	89	98.89	1.0000
Yes	1	1.82	0	0.00	1	1.11	
Subhepatic							
No	55	100.00	34	97.14	89	98.89	1.0000
Yes	0	0.00	1	2.86	1	1.11	
Subcaecal							
No	51	92.73	35	100.00	86	95.56	0.1030
Yes	4	7.27	0	0.00	4	4.44	
Total	55	100.00	35	100.00	90	100.00	

DISCUSSION:

Acute appendicitis (AA) is a common cause of acute abdomen that warrants need for surgery. Its diagnosis remains a challenge because sometimes clinically it can be mimicking other conditions. It can be confused number of urologic or gynecologic diseases, mesenteric lymphadenitis, gastroenteritis, constipation and right lower lobe pneumonia. Moreover, the time from the onset of the disease to accurate diagnosis and treatment is critical in the management of patients with AA. Late diagnosis increases the chances of complications.[16]

In the present study, the occurrence of appendicitis in males (60%) was more than in females (40%) suggesting male preponderance. Most of the patients of the study population were aged below 30 years (38.89%) the mean of 38.1 also indicated the presence of a younger age group. Previous literature reported that the incidence of appendicitis gradually rises from birth, peaks in the late teen years, and gradually declines in the geriatric years. [18]

In a study done by Zafar Iqbal and et al, "Comparison Between Predicted Position Of Appendix On Clinical Examination And Position Of Appendix As An Intraoperative Finding In Patients With Clinically Suspected Acute Appendicitis" Retrocecal, pelvic, subcecal, paracecal, and subhepatic locations were frequently found during intraoperative examinations in 56%, 23%, 10%, 7%, and 4% of patients, respectively. [19] [20] [21]

In a study done by Akanksh Chokkapu et al, "Acute Appendicitis: Correlation between Ultrasonographic and Surgical Findings", The most common position of appendix was retro-caecal(78.20%) the percentage of which is greater than that of the study done by wakeley10, followed by pelvic (16.66%),

Whereas in this study, 64.4 % of patients had a retroceacal appendix. The second most common position was a pelvic appendix with 26.67 %. followed by subcecal, pre-ileal, paracecal and subhepatic with 4.4%, 2.2% and 1.1% each respectively. [(22) (23)]

In a study done by, Akanksh Chokkapu et al Right lower quadrant tenderness was seen in 85% of the patients, rebound tenderness in 41% , fever in 22% and nausea/vomiting was seen in about 78% , leukocytosis was seen in 79% of the patients. [(22) (23)]

Whereas in our study, pain in right iliac fossa was seen in 71.1%, vomiting was seen in 57.78%, pain radiating to loin was seen in 40%, and loose stools were seen in 15.56% of the patients.

Presence of nausea with or without accompanying vomiting is common, as well as anorexia. Constipation or diarrhoea may also be present. The inflammation at the appendiceal tip increases as the time progresses. The peritoneal irritation that follows causes the pain to settle in its traditional place at the lower right corner. This phenomenon continues to be typical appendicitis symptom. This ought should help even more the clinician's level of suspicion for appendicitis should rise.

We have on occasion encountered patients presenting with symptoms of small bowel obstruction who were found to be obstructed by multiple interloop abscesses because of unrecognised appendiceal perforation. Although cases such as these are less common knowledge of the variations is essential to maintain the necessary index of suspicion to permit a prompt and accurate diagnosis.

In the current study, there was no significant association between vomiting and any position of appendix, pain in the right iliac fossa was significantly associated with retrocecal and pelvic positions of the appendix.

Also, loose stools (73.3%) were significantly associated with the pelvic position of appendix.

In the current study retrocecal position showed significant association with Cope psoas test (64.4%) and Baldwing's test (92%).

Table 21: Association between status of Rovsing's sign and positions of appendix

Positions	No Rovsing 's sign	%	Yes Rovsing 's sign	%	Total	%	p-value
Retrocaecal							
No	14	43.75	18	31.03	32	35.56	0.2280
Yes	18	56.25	40	68.97	58	64.44	
Pelvic							
No	21	65.63	45	77.59	66	73.33	0.2190
Yes	11	34.38	13	22.41	24	26.67	
Pre-ileal							
No	30	93.75	58	100.00	88	97.78	0.0540
Yes	2	6.25	0	0.00	2	2.22	
Post- ileal							
No	32	100.0	57	98.28	89	98.89	1.0000
Yes	0	0.00	1	1.72	1	1.11	
Subhepatic							
No	31	96.88	58	100.00	89	98.89	1.0000
Yes	1	3.13	0	0.00	1	1.11	
Subcaecal							
No	32	100.0	54	93.10	86	95.56	0.1290
Yes	0	0.00	4	6.90	4	4.44	
Total	32	100.0	58	100.00	90	100.00	

In the current study there was no significant association of Rovsing's sign with any position of the appendix.

In the current study pelvic position showed a significant association with obturator test.

In the current study there was significant association of pelvic position with loose stools and obturator sign. Also between retrocecal position and cope psoas test, Baldwing's sign. These results can help in preventing a misdiagnosis of appendicitis due to variable positions of appendix. Thereby being able to differentiate from other acute abdomen conditions.

CONCLUSION:

A surgeon's clinical skills and knowledge still remains the mainstay in diagnosing a case of appendicitis , even with a variety of radiological and blood investigations. The knowledge of various positions of the appendix and their specific ways of presentations will further help the surgeon to differentiate the atypical presentations of appendicitis due to different positions from other acute abdominal pathologies.

SUMMARY

The position of appendix can vary owing to the different lengths of appendix and position of caecum .There is a variation of clinical features according to the position of appendix. Although in the case of an atypical position the tip is usually located behind the caecum , there are possible locations that occur rarely. There is a variation of clinical features according to the position of appendix. In a retrocaecal appendicitis, when the organ is entirely retroperitoneal there is hardly any tenderness and rigidity in the anterior abdomen, there may be some tenderness in the right flank or more posteriorly. Hence, this can lead to a wrong diagnosis. Hence, it is very essential to study, compare and establish the relation between the positions of the appendix and their specific clinical presentations.

The Study design was a Prospective, observational study ,for a Duration of 1 year between January 2021 to December 2021.The source of data will be all t h e patients presenting with acute appendicitis admitted in general surgery wards at KAHER'S Dr. Prabhakar Kore Charitable Hospital and Medical Research Centre, Nehrunagar, Belagavi.

In this study the results showed , 64.4 % of patients with a retroceacal appendix. The second most common position was a pelvic appendix with 26.67 %. followed by subcecal, pre-ileal , paracecal and subhepatic with 4.4%, 2.2% and 1.1% each respectively.

The statistical analysis showed that the pain in the right iliac fossa was significantly associated with retrocecal and pelvic positions of the appendix.

Also , loose stools (73.3%) were significantly associated with the pelvic position of appendix.

In the current study retrocecal position showed significant association with Cope psoas test (64.4%) and Baldwing's test (92%).

Hence it was concluded that a surgeon's clinical skills and knowledge still remains the mainstay in diagnosing a case of appendicitis , even with a variety of radiological and blood investigations. The knowledge of various positions of the appendix and their specific ways of presentation will further help the surgeon to differentiate the atypical presentations of appendicitis due to different positions from other acute abdominal pathologies.

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ANNEXURE I – CONSENT FORM

Purpose of the study

I have been informed by _____, Post Graduate in M.S.General Surgery under the guidance of _____, Associate Professor Department of General Surgery, J.N. Medical College, KAHER University, Belagavi is conducting a study to correlate the clinical presentations of acute appendicitis with intra operative anatomical positions of appendix at KAHER'S Dr.Prabhakar Charitable Hospital And Medical Research Centre, Belagavi.

Study procedure

Once you have signed the informed consent, necessary personal information and detailed medical history will be taken by the investigator

Potential risk

This is a purely observational study,no risks are expected.

Financial incentive for participation

You will not receive any payment for taking part in this study.

Alternatives

Your participation in this study is entirely voluntary. You are free to refuse to participate or withdraw from the study at any time. You will still receive standard medical care from the hospital. The investigator holds the right to terminate the study at any time

Privacy

To protect my privacy, all the collected information will be given a number rather than using my name. Any information collected during the study will remain confidential. My medical files will be reviewed only at the hospital (or study doctor's office) to check the information and verify the result without breaking my confidentiality.

Authorization to publish results

The information about me will be analysed together with other study participants.Results of this study will be published and presented to scientific groups for scientific purposes, but I will never be individually identified in the presentation of the study results.

Institutional policy

In case you have any questions related to the study, in future or in case of study related injury or illness, you can contact

Voluntary participation

Your participation in the study is voluntary. In case you need any further information regarding your rights as study participant, you may contact **DR. HARSHA HEGDE**, as Chairman of J. N. Medical College Institutional Ethics Committee on Human Subjects Research, Phone No.0831 2473777 ext-1527 at J. N. Medical College, Belagavi. You are free to stop participation in this study at any time and for any reason.

CONSENT FORM

Study title: **" PROSPECTIVE EVALUATION OF CORRELATION BETWEEN THE SIGNS AND SYMPTOMS OF ACUTE APPENDICITIS WITH THEIR RESPECTIVE INTRA OPERATIVE POSITIONS OF APPENDIX"**:- A ONE YEAR OBSERVATIONAL STUDY at KAHERs Dr Prabhakar Kore Charitable Hospital and Medical Research Centre, Belagavi .

Please initial box

i. I confirm that I have read and understood the information sheet for the above study and have had the opportunity to ask questions.

ii. I understood that my participation in the study is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

iii. I understood that sponsor of the clinical trial, others working on the sponsor's behalf, the Ethics Committee and the regulatory authorities will not need my permission to look at my health records both in respect of current study and any further research that may be conducted in relation to it, even if I withdraw from the trial. I agree to this access. However, I understood that my identity will not be revealed in any information released to third parties or published.

iv. I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purposes.

v. I agree to take part in the above study.

Subject's name:

Signature / left thumb impression of subject:

Date: **Name of person obtaining informed consent:**

Signature of person obtaining informed consent:

(If a patient has limited ability to read and write, an impartial witness should be present during the entire informed consent discussion and patient's legally acceptable representative should sign on the patient's behalf.) In these instances the patient his/her thumb impression taken in place of signature.

Patient's legally acceptable representative's statement: NA

I, as the patient's legally acceptable representative was present during the consenting procedure and understand the preceding information describing this study. All of the questions regarding the study and the patient's participation in it have been answered to my satisfaction. I state that all aspects of the study were clearly presented during the consent procedure. The patient is willing to participate in this study and I sign below on his/her behalf testifying to this effect.

Name of the patient:

Name of representative:

Relationship to the patient:

Signature of representative:

Date:

Impartial witness declaration:

By signing the consent form I attest that the information was accurately explained to and apparently understood by the patient and the representative (if applicable) and that the informed consent was freely given by the patient.

ANNEXURE II: PROFORMA

SCREENING PROFORMA

I.D NO: ☐ ☐☐☐

1.Name of the patient :_____

2.Age : ☐

3.Gender : 1. Male 2. Female ☐

4.DOA : ☐☐ ☐☐ ☐☐☐☐

5.ONSET OF SYMPTOMS:
Acute
Chronic

6.COMORBIDITIES
1.HYPERTENSION **YES** ◯ **NO** ◯

2.DIABETIS MELLITUS **YES** ◯ **NO** ◯

7.PREVIOUS ABDOMINAL SURGERY

YES ◯ **NO** ◯

8.DOD : ☐☐☐☐☐☐

9.Date of interview : ☐☐ ☐☐ ☐☐☐☐

10.IP no: ☐☐☐☐☐☐

11.Address : 1.Belagavi ☐ 2.Outside Belagavi ☐

12.Phone ☐☐☐☐☐☐☐☐☐☐ :

13.Occupation : 1-Unemployed
2-Unskilled
3-Semi-skilled ☐
4-Skilled
5-Professional

14.Education : 1-Illiterate
2-Primary (1^{st}-7^{th} std) ☐
3-High school (8^{th}-10^{th} std)
4-Intermediate
5-Degree and above

15.Socio-economic status :1-Low ☐
2-Middle
3-High

16.**Final result**
1-Inelgible ☐
2-Elgible but refused
3-Elgible and participating

DATA COLLECTION INSTRUMENT

I.D NO: ☐

PRE OPERATIVE:

YES:1 NO: 2

SYMPTOMS:

1.PAIN ☐

a.Right iliac fossa ☐

b.Left iliac fossa ☐

c.Epigastric area ☐

d.Paraumbilical area ☐

e.Right hypochondrium ☐

f.Left hypochondrium ☐

g.Supra pubic ☐

h.Right lumbar ☐

i.Left lumbar ☐

j.Generalised pain ☐

2.FEVER ☐

3.NAUSEA ☐

4.VOMITING ☐

5.DIARRHOEA ☐

DATA COLLECTION INSTRUMENT

I.D NO: ☐

PRE OPERATIVE:

YES:1 NO: 2

SYMPTOMS:

1.PAIN ☐

- **a.Right iliac fossa** ☐
- **b.Left iliac fossa** ☐
- **c.Epigastric area** ☐
- **d.Paraumbilical area** ☐
- **e.Right hypochondrium** ☐
- **f.Left hypochondrium** ☐
- **g.Supra pubic** ☐
- **h.Right lumbar** ☐
- **i.Left lumbar** ☐
- **j.Generalised pain** ☐

2.FEVER ☐

3.NAUSEA ☐

4.VOMITING ☐

5.DIARRHOEA ☐

SIGNS:

ON EXAMINATION:

1.TENDERNESS: **YES 1** **NO 2** ☐

- **RIGHT ILIAC FOSSA** ☐
- **LEFT ILIAC FOSSA** ☐
- **RIGHT LUMBAR** ☐
- **LEFT LUMBAR** ☐
- **EPIGASTRIC** ☐
- **PARA UMBILICAL** ☐
- **RIGHT HYPOCHONDRIUM** ☐
- **LEFT HYPOCHONDRIUM** ☐
- **SUPRAPUBIC** ☐
- **GENERALISED TENDERNESS** ☐

2.GUARDING: ☐

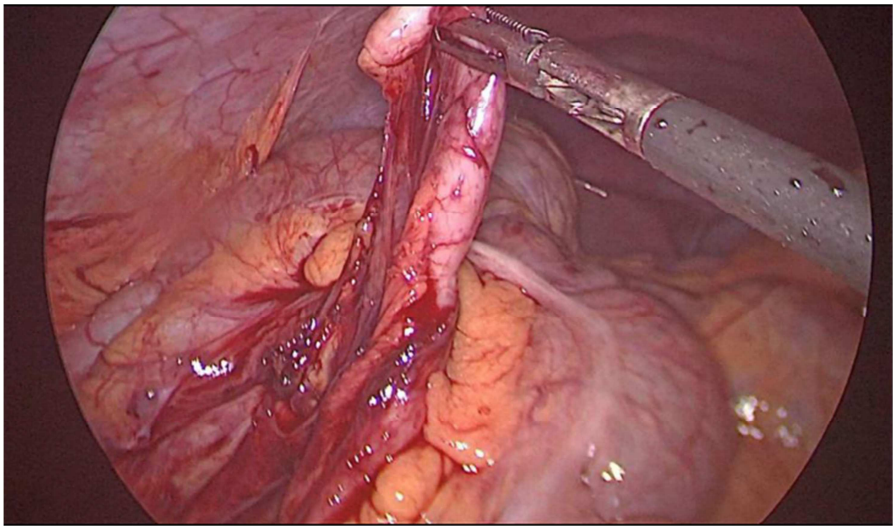
3.RIGIDITY: ☐

4.BOWEL SOUNDS: ☐

INTRA OPERATIVE:

	YES 1	NO 2
Position of the appendix:		
1.Retrocaecal		
2.Para caecal		
3.Post ileal		
4.Pre ileal		
5.Pelvic		
6.Sub hepatic		
7.Sub caecal		
8.Left sided		

ANNEXURE III: PHOTOGRAPHS



Photograph 1:INFLAMED RETROCAECAL APPENDIX

Photograph 2:Subhepatic appendix

ANNEXURE IV: MASTER CHART

DEMOGRAPHICS					SYMPTOMPMS				SIGNS					LABORATORY INVESTIGATIONS		RADIO. ASSESSMENT	Histopatholoy Report	position of appendix					
Sr. Number	**IP. Number**	**Age**	**Gender**	**Duration Of Hospital stay IN DAYS**	**C/o Vomiting**	**pain radiating to loin**	**C/o Pain in right illiac fossa**	**Loose stools**	**Rovsing's sign**	**Temperature in (CELCIUS)**	**Cope psoas test**	**Obturator test**	**Baldwing's test**	**Total Leucocyte Count (PER ml)**	**TLC >12,000cells/mm**	**Usg Findings**	**Histopatholoy Report**	**retrocaecal**	**pelvic**	**pre-ileal**	**post- ileal**	**subhepatic**	**subcaecal**
1	1035308	27	FEMALE	6	ABSENT	1	ABSENT	2	PRESENT	37.2	1	2	1	16,000	PRESENT	ABSENT	ACUTE ON CHRONIC APPENDIX	1	2	2	2	2	2
2	1038684	25	MALE	4	PRESENT	2	PRESENT	2	PRESENT	37.8	2	2	2	9,390	ABSENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
3	1036239	32	FEMALE	5	ABSENT	2	PRESENT	2	PRESENT	38.5	2	2	2	10,400	ABSENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
4	1036841	22	MALE	4	PRESENT	1	ABSENT	2	PRESENT	38.6	1	2	1	12,040	PRESENT	PRESENT	ACUTE ON CHRONIC APPENDIX	1	2	2	2	2	2
5	1033656	31	MALE	5	PRESENT	2	PRESENT	1	PRESENT	38.1	2	1	2	8890	ABSENT	PRESENT	SUB- ACUTE APPENDICITIS	2	1	2	2	2	2
6	1033914	24	FEMALE	3	ABSENT	1	ABSENT	2	ABSENT	37.4	1	2	1	9,900	ABSENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
7	1034336	25	FEMALE	4	ABSENT	1	ABSENT	2	ABSENT	37.8	1	2	2	7660	ABSENT	PRESENT	SUB- ACUTE APPENDICITIS	1	2	2	2	2	2
8	1064872	18	MALE	4	ABSENT	2	PRESENT	1	ABSENT	38.6	2	1	1	18560	PRESENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
9	1033417	44	MALE	7	ABSENT	1	ABSENT	2	PRESENT	37.6	1	2	1	5670	ABSENT	PRESENT	ACUTE ON CHRONIC APPENDIX	1	2	2	2	2	2
10	1035875	52	FEMALE	5	PRESENT	1	PRESENT	1	ABSENT	37.8	2	1	2	7500	ABSENT	ABSENT	CHRONIC APPENDICITIS	2	1	2	2	2	2
11	1033779	15	MALE	5	PRESENT	2	PRESENT	2	ABSENT	38.6	2	2	2	9900	ABSENT	ABSENT	SUB- ACUTE APPENDICITIS	2	1	2	2	2	2
12	1043498	38	FEMALE	4	PRESENT	2	PRESENT	2	PRESENT	37.2	2	2	2	9830	ABSENT	PRESENT	ACUTE ON CHRONIC APPENDIX	1	2	2	2	2	2
13	1075765	24	FEMALE	6	PRESENT	2	PRESENT	1	PRESENT	38.6	2	1	2	12,000	PRESENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
14	1046221	16	MALE	3	PRESENT	2	ABSENT	2	PRESENT	38.3	1	2	1	8500	ABSENT	PRESENT	SUB- ACUTE APPENDICITIS	1	2	2	2	2	2
15	1037945	28	MALE	5	PRESENT	1	ABSENT	2	PRESENT	37.2	1	2	1	7090	ABSENT	ABSENT	SUB- ACUTE APPENDICITIS	1	2	2	2	2	2
16	1065626	40	FEMALE	3	ABSENT	1	PRESENT	1	ABSENT	36.9	2	1	2	11,289	ABSENT	ABSENT	SUB- ACUTE APPENDICITIS	2	1	2	2	2	2
17	1048260	49	MALE	4	ABSENT	1	PRESENT	2	PRESENT	37.2	1	2	1	19,700	PRESENT	PRESENT	IMPENDING PERFORATION OF APPENDIX	1	2	2	2	2	2
18	1057516	30	FEMALE	3	PRESENT	2	PRESENT	2	ABSENT	37.5	1	2	1	11,000	ABSENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
19	1061676	19	MALE	9	PRESENT	2	PRESENT	2	ABSENT	37.8	2	2	2	7,500	ABSENT	ABSENT	ACUTE APPENDICITIS	2	2	1	2	2	2
20	1041862	32	FEMALE	5	PRESENT	2	ABSENT	2	PRESENT	38.5	1	2	1	15,690	PRESENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
21	1040230	18	MALE	3	ABSENT	2	ABSENT	2	PRESENT	38.1	1	2	1	6,650	ABSENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
22	1052976	56	MALE	5	PRESENT	1	PRESENT	2	PRESENT	38.4	2	1	2	16,310	PRESENT	ABSENT	IMPENDING PERFORATION OF APPENDIX	2	1	2	2	2	2
23	1053985	21	MALE	4	PRESENT	2	PRESENT	2	ABSENT	37.4	2	2	2	15,700	PRESENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
24	1055398	28	FEMALE	4	PRESENT	2	PRESENT	2	PRESENT	38.4	2	2	1	10,400	ABSENT	ABSENT	ACUTE APPENDICITIS	2	1	2	2	2	2
25	1058946	40	MALE	8	ABSENT	2	ABSENT	2	ABSENT	38.6	1	2	1	9,130	ABSENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
26	1084264	62	MALE	2	PRESENT	2	PRESENT	2	PRESENT	38.4	2	1	2	17,700	PRESENT	ABSENT	ACUTE ON CHRONIC APPENDIX	2	1	2	2	2	2
27	1084212	23	FEMALE	4	PRESENT	1	PRESENT	2	ABSENT	38	2	2	2	10,310	ABSENT	PRESENT	ACUTE ON CHRONIC APPENDIX	2	2	2	2	1	2
28	1084230	45	MALE	3	ABSENT	2	ABSENT	2	ABSENT	37.6	1	2	1	15,660	PRESENT	PRESENT	ACUTE ON CHRONIC APPENDIX	1	2	2	2	2	2
29	1039545	17	MALE	7	ABSENT	1	PRESENT	2	ABSENT	37.6	1	2	1	9,420	ABSENT	ABSENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
30	1043667	49	FEMALE	4	PRESENT	1	ABSENT	2	PRESENT	37.8	1	2	1	17,300	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2

31	1044269	17	MALE	4	PRESENT	2	PRESENT	2	PRESENT	38	2	1	2	8,800	ABSENT	ABSENT	CHRONIC APPENDICITIS	2	1	2	2	2	2
32	1044158	51	FEMALE	7	ABSENT	2	PRESENT	2	PRESENT	38.2	2	2	2	9,300	ABSENT	ABSENT	CHRONIC OBLITERATED APPENDICITIS	1	2	2	2	2	2
33	1046225	35	MALE	6	PRESENT	2	PRESENT	2	PRESENT	38.5	2	2	2	7,400	ABSENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
34	1080161	23	MALE	6	PRESENT	2	ABSENT	2	PRESENT	38.4	1	2	1	16,300	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
35	1079707	21	MALE	9	PRESENT	2	PRESENT	2	PRESENT	37.4	2	2	2	15,700	PRESENT	ABSENT	ACUTE APPENDICITIS	2	2	2	2	2	1
36	1080148	24	FEMALE	6	PRESENT	2	PRESENT	1	PRESENT	37.6	2	1	2	16,400	PRESENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
37	1079337	42	MALE	8	ABSENT	1	PRESENT	2	ABSENT	38.1	1	2	1	7,890	ABSENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
38	1080509	40	FEMALE	4	PRESENT	2	PRESENT	2	ABSENT	37.6	2	2	2	8,750	ABSENT	ABSENT	CHRONIC OBLITERATED APPENDICITIS	2	1	2	2	2	2
39	1080717	42	FEMALE	6	PRESENT	1	PRESENT	2	PRESENT	38.2	1	2	1	6,200	ABSENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
40	1080958	19	MAE	5	PRESENT	1	ABSENT	2	PRESENT	37.8	1	2	1	15,390	PRESENT	PRESENT	ACUTE ON CHRONIC APPENDIX	1	2	2	2	2	2
41	1086407	19	MALE	7	ABSENT	2	ABSENT	2	PRESENT	38.2	1	2	1	14,630	PRESENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
42	1037184	72	MALE	3	PRESENT	2	PRESENT	2	ABSENT	38.5	2	2	2	11,190	ABSENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
43	1040392	24	FEMALE	3	ABSENT	2	PRESENT	2	ABSENT	38	2	1	1	7,680	ABSENT	PRESENT	CHRONIC APPENDICITIS	2	1	2	2	2	2
44	1052050	34	MALE	5	PRESENT	2	PRESENT	2	ABSENT	38.6	2	2	2	11,200	ABSENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
45	1056819	71	FEMALE	7	ABSENT	2	ABSENT	2	PRESENT	38.6	1	2	1	11,870	ABSENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
46	1054764	54	FEMALE	6	PRESENT	1	ABSENT	2	ABSENT	37.8	1	2	1	12,900	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
47	1089199	48	male	4	PRESENT	2	ABSENT	2	PRESENT	38.5	1	2	2	15690	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
48	1089744	49	male	4	ABSENT	2	ABSENT	2	PRESENT	38.5	2	1	2	16400	PRESENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
49	1090517	62	male	3	PRESENT	2	PRESENT	2	PRESENT	38.2	2	2	2	15690	PRESENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
50	1090653	42	female	5	PRESENT	2	PRESENT	2	PRESENT	38.5	2	2	2	17000	PRESENT	PRESENT	ACUTE APPENDICITIS	2	2	2	2	2	1
51	1090718	24	female	8	ABSENT	1	PRESENT	2	ABSENT	38.2	1	2	1	16900	PRESENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
52	1091630	26	male	2	ABSENT	2	PRESENT	2	ABSENT	38.4	2	2	2	17400	PRESENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
53	1091724	63	male	4	PRESENT	2	PRESENT	2	PRESENT	38.4	2	2	2	17100	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
54	1093030	28	male	5	PRESENT	2	PRESENT	2	PRESENT	38.5	1	2	1	16400	PRESENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
55	1093623	40	male	7	PRESENT	1	ABSENT	1	ABSENT	38.4	2	1	2	14000	PRESENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
56	1093694	28	male	9	PRESENT	1	PRESENT	2	PRESENT	37.6	1	2	1	19000	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
57	1093768	30	female	3	ABSENT	1	PRESENT	2	PRESENT	38.4	1	2	1	15690	PRESENT	ABSENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
58	1094574	40	male	4	ABSENT	1	ABSENT	2	ABSENT	38.5	1	2	1	19400	PRESENT	ABSENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
59	1096106	54	male	4	PRESENT	2	PRESENT	1	ABSENT	38.4	2	1	2	14700	PRESENT	ABSENT	ACUTE APPENDICITIS	2	1	2	2	2	2
60	1096725	37	male	5	PRESENT	1	PRESENT	2	PRESENT	38.5	2	2	2	16400	PRESENT	PRESENT	ACUTE APPENDICITIS	2	2	2	2	2	1
61	1096823	35	male	5	ABSENT	2	ABSENT	2	**PRESENT**	37.6	1	2	1	9100	ABSENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
62	1097651	46	male	8	ABSENT	2	PRESENT	2	PRESENT	38.4	2	2	2	16700	PRESENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
63	1099032	28	male	8	PRESENT	2	PRESENT	2	PRESENT	38.5	2	2	1	15690	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
64	1100973	40	female	4	PRESENT	1	PRESENT	2	PRESENT	38.5	1	2	2	20100	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
65	1103704	33	female	4	PRESENT	1	ABSENT	2	ABSENT	38.4	1	2	1	19400	PRESENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
66	1104046	21	female	5	PRESENT	2	PRESENT	1	ABSENT	37.6	2	1	2	7400	ABSENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
67	1104993	16	male	5	ABSENT	2	PRESENT	2	PRESENT	38.4	2	2	2	14900	PRESENT	PRESENT	ACUTE APPENDICITIS	2	2	2	2	2	1
68	1105074	25	female	4	ABSENT	1	ABSENT	2	PRESENT	38.2	1	2	1	16450	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
69	1123999	60	male	3	PRESENT	1	PRESENT	2	PRESENT	38.5	1	2	1	15690	PRESENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
70	1106149	39	male	4	PRESENT	2	PRESENT	2	PRESENT	38.5	2	2	2	17400	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
71	1106174	24	female	5	ABSENT	2	ABSENT	1	ABSENT	38.4	2	1	2	19300	PRESENT	ABSENT	ACUTE APPENDICITIS	2	1	2	2	2	2

72	1106215	26	female	3	ABSENT	2	PRESENT	2	ABSENT	37.6	2	2	2	9130	ABSENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
73	1106710	80	female	5	ABSENT	2	PRESENT	2	PRESENT	38.4	2	2	2	16400	PRESENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
74	1107483	33	male	3	ABSENT	1	PRESENT	2	PRESENT	38.2	1	2	1	15690	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
75	1107522	60	male	4	PRESENT	1	ABSENT	2	PRESENT	38.2	1	2	1	16400	PRESENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
76	1107551	31	female	5	PRESENT	1	PRESENT	1	PRESENT	37.6	2	2	2	10140	ABSENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
77	1107599	36	male	3	PRESENT	2	PRESENT	2	ABSENT	38.4	2	2	2	17400	PRESENT	ABSENT	ACUTE APPENDICITIS	2	2	1	2	2	2
78	1107711	79	female	5	PRESENT	2	PRESENT	2	PRESENT	38.4	2	2	2	19300	PRESENT	ABSENT	ACUTE APPENDICITIS	2	2	2	1	2	2
79	1107731	45	female	3	ABSENT	1	PRESENT	2	PRESENT	37.6	1	2	1	16400	PRESENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
80	1109109	50	male	4	ABSENT	2	PRESENT	2	PRESENT	38.5	2	2	2	16500	PRESENT	PRESENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
81	1109120	34	female	9	ABSENT	2	PRESENT	2	PRESENT	38.5	2	2	1	17500	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
82	1110321	38	male	5	ABSENT	2	PRESENT	2	ABSENT	38.2	2	2	2	14300	PRESENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
83	1110531	55	male	4	PRESENT	2	PRESENT	1	PRESENT	38.5	2	1	2	15690	PRESENT	ABSENT	ACUTE APPENDICITIS	2	1	2	2	2	2
84	1125800	66	male	4	PRESENT	2	PRESENT	1	PRESENT	37.6	2	2	2	8200	ABSENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
85	1112567	53	female	4	ABSENT	1	PRESENT	2	ABSENT	38.2	1	2	1	17400	PRESENT	ABSENT	CHRONIC APPENDICITIS	1	2	2	2	2	2
86	1113566	62	male	4	PRESENT	1	PRESENT	2	ABSENT	38.5	1	2	2	19300	PRESENT	ABSENT	ACUTE APPENDICITIS	1	2	2	2	2	2
87	1113934	56	male	3	ABSENT	1	PRESENT	2	PRESENT	37.6	1	2	1	11040	ABSENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
88	1114413	65	female	5	PRESENT	1	PRESENT	2	PRESENT	38.2	1	2	1	19400	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2
89	1110511	47	male	9	ABSENT	2	PRESENT	1	PRESENT	38.5	2	2	2	15690	PRESENT	PRESENT	ACUTE APPENDICITIS	2	1	2	2	2	2
90	1115628	38	male	4	**ABSENT**	**1**	PRESENT	2	PRESENT	38.5	1	2	2	16280	PRESENT	PRESENT	ACUTE APPENDICITIS	1	2	2	2	2	2