MANAGEMENT OF APPENDICULAR LUMP AT TERTIARY CARE HOSPITAL

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ABSTRACT

BACKGROUND

Among the acute surgical conditions, acute appendicitis is encountered in 2-6% of Patients. If appendectomy is not done, a lump is formed in about 3-6% of cases. After the onset of symptoms, a lump is formed after 48-72 hours and signifies obstruction and risk of perforation and consequent complications.

MATERIALS AND METHODS

This study consists of 356 patients which were diagnosed by physical examination, ultrasound and computed tomography (CT) as cases of appendiceal mass and were treated at the department, from October 2014 to October 2018. Patients were divided into two groups group (A) consists of those who underwent emergency surgery for appendicitis and who underwent emergency surgery after conservative management and group (B) consists of those with a lump and were subjected to conservative management. Clinical parameters that were evaluated were age, gender, demography, operative time, hospital stay, intra-operative and post-operative complications.

RESULTS

Mean age of the patients in our study was 22.25 with male-female ratio of 1.49. Mean operative time in group (A) was 95 minutes and in group (B) was 60 minutes. In our study of 356 patients, we encountered more difficulty in dissection and other complications in an immediate surgical group (A) while in group (B) the incidence of these complications was significantly low and p-Value was significant <0.005.

CONCLUSION

In our study of 356 patients, we have successfully managed 284 patients conservatively and subjected them to interval appendectomy. The patient should receive primary nonsurgical treatment with antibiotics and abscess drainage as needed. Emergency exploration of an appendicular lump should be avoided as it leads to dissemination of infection and intestinal fistula formation. After successful nonsurgical treatment, interval appendectomy is indicated.

KEYWORDS

Appendectomy, Abscess, Appendicitis.

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BACKGROUND

Among the acute surgical conditions, Acute Appendicitis is encountered in 2-6% of Patients.[1] If appendectomy is not done a lump is formed in about 3-6% of cases.[2] After the onset of symptoms a lump is formed after 48-72 hours and signifies obstruction and risk of perforation and consequent complications.[3] Classical management is conservative with intravenous fluids and antibiotics with continuous monitoring of vitals until the inflammation subsides. The need for interval Appendectomy is a debatable topic some advocate it while others don't support interval Appendectomy after initial successful conservative management of Acute Appendicitis.[4,5] Therefore, the present study was undertaken with the aim to evaluate the outcome of an appendicular lump who are subjected to conservative management after diagnosing it clinically and radiologically.

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MATERIALS AND METHODS

The present study was conducted at government medical college Srinagar Kashmir and is prospective in design. This study consists of 356 patients which diagnosed by physical examination, ultrasound and computed tomography (CT) as a case of appendiceal mass and abscess were treated at the

department, from October 2014 to October 2018. Patients were divided into two groups group (A) consists of those who underwent emergency surgery for Appendicitis and who underwent emergency surgery after conservative management and group (B) consists of those with a lump and were subjected to conservative management. Patients who underwent interval Appendectomy after 6-8 weeks of successful conservative management and those who have undergone percutaneous drainage of appendicular Abscess were also included in group (B). Clinical parameters that were evaluated were age, gender, demography, operative time, hospital stay, intra-operative and post-operative complications.

RESULTS

Age Distribution

Among 356 patients with appendicular lump maximum number of patients admitted in our hospital were middle aged and at the extreme of age i.e. children and elderly frequency of lump formation was less and is shown in table (1) and figure (1). Mean age of 22.25.

Age Group	Number of Patients
1-10	4
11-20	80
21-30	76
31-40	84
41-50	54
51-60	22
61-70	28
71-80	8

Table 1. Age Distribution

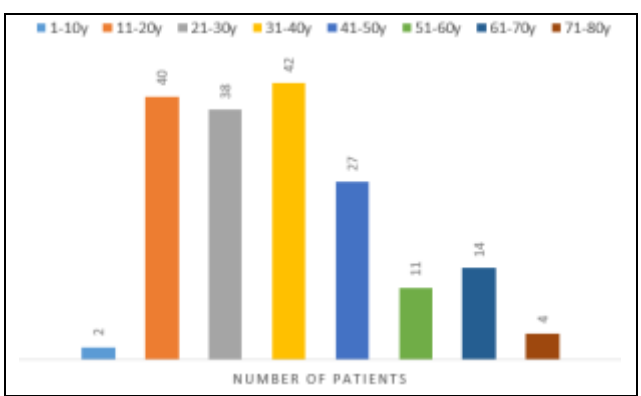

Figure 1. Age Distribution

Patient Distribution

Group (A) consists of patients who undergone exploratory laparotomy for acute abdominal pathology (peritonitis) and intra-operatively appendicular lump was diagnosed. Group (B) consists of patients who were conservatively managed case of appendicular lump and later subjected to interval appendectomy. Patients who needed radiological guided drainage of appendicular abscess were included in this study.

Group	Number of Patients
Group (A)	72
Group (B)	284

Table 2. Patient Distribution

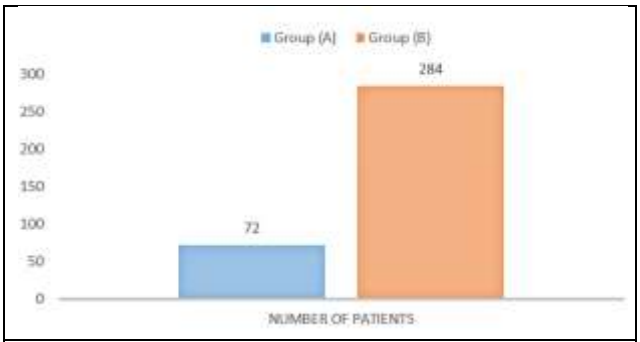

Figure 2. Patient Distribution

Sex Distribution

In the group (A) which consists of patients with male female ratio of 1.76. Similar results were seen in group (B) were males also predominated with male female ratio of 1.49. With P value of 0.65.

Group	Males	Females	Ratio
Group (a)	46	26	1.76
Group (b)	170	114	1.49
Total	216	140	

Table 3. Sex Distribution

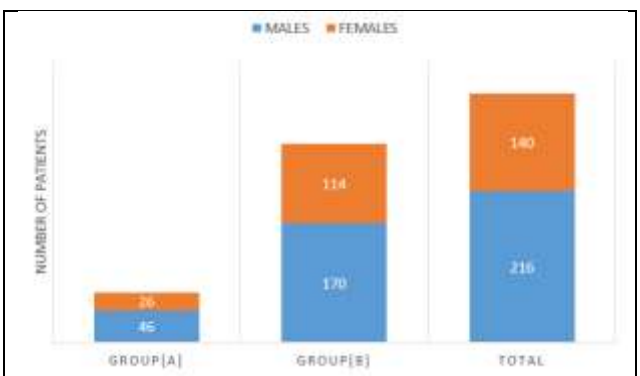

Figure 3. Number of Patients in the Respective Groups

Demography

Most of the people in our study among 356 patients belongs to rural areas with a ratio of rural to urban in group (A) and group (B) of 3.5 and 4.9 respectively. With P value of 0.45. As shown in table and figure- 4.

Group	Rural	Urban	Ratio
Group (a)	56	16	3.5
Group (b)	236	48	4.9

Table 4. Demographic Distribution

Figure 4. Demographic Distribution

Operative Time

Patients in our study were divided into two categories regarding the operative time. Category first were those where operative time was less than one hour, second one is where operative time is greater than one hour from skin incision to skin closure. As shown in table and figure- 5. With P value of 0.0009 which is statistically very significant. Mean operative time in group (A) was 95 minutes and in group (B) was 60 minutes.

Operative Time	Group (A)	Group (B)
< 1 hour	22	174
>1 hour	50	110
Total	72	284

Table 5. Operative Time

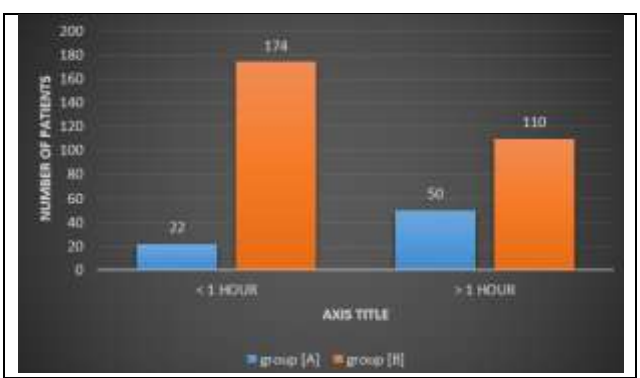

Figure 5. Operative Time

Complications

A- Operative Complications

In our study of 356 patients we encountered more difficulty in dissection and other below mentioned complications in immediate surgical group (A) while in group (B) the incidence of these complications were significantly low and P Value was significant <0.005 in all the categories while comparing, as shown in table and figure 6.

Operative Complications	Group A	Group B
Difficulty in dissection	61%	37%
Difficulty in finding Appendix	44%	13%
Bleeding	18%	5%
Adjacent bowel injury	20%	2%
Need to extend incision	8%	1%

Table 6a. Operative Complications

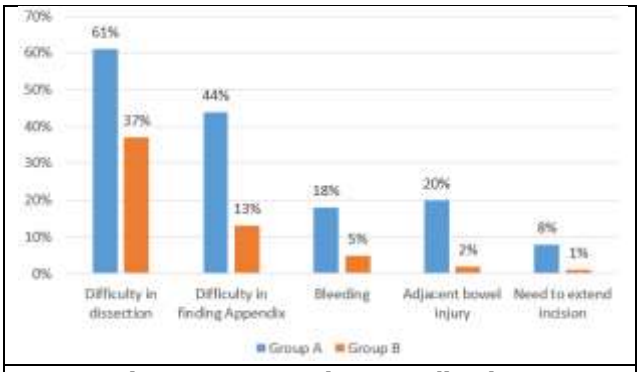

Figure 6a. Operative Complications

B- Postoperative Complications

Post-operative Complications	Group (A)	Group (B)
Wound sepsis	9%	3%
Incisional hernia	11%	1%
Intestinal fistula	1%	0%
Adhesion obstruction	5%	1%

Table 6b. Post-Operative Complications

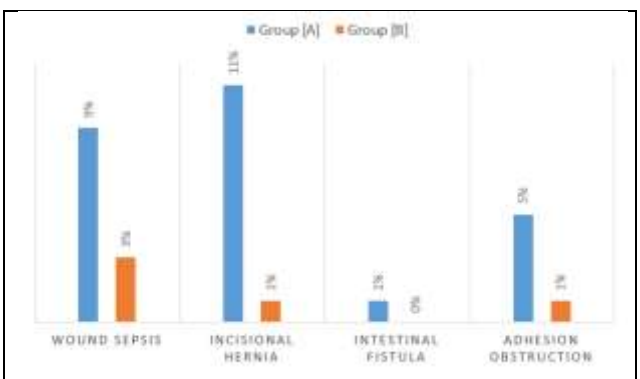

Figure 6b. Postoperative Complications

DISCUSSION

The reason for the formation of the Appendiceal mass is due to perforation of the Appendiceal wall.[6] There are 3 methods for management of appendiceal mass: emergency surgery, conservative management followed by interval surgery, and totally conservative management without interval surgery.[7] The "classical" management of Appendiceal mass is conservative followed by interval appendectomy and a more modern approach is purely conservative that aims to avoid appendectomy.[8]

In our study of 356 patients Mean age of the patients admitted was 22.25 with male-female ratio of 1.49 similar observations were encountered by study carried by Patel BJ[9] (figure and table 1 and 3)reported most cases present around the age group 21-30 years (35.94%) and male: female ratio of 1.91:1. In our study, most of the people belong to the rural population (Figure and Table 4). Regarding the operative time (Figure and Table 5). in our study the overall time elapsed in emergency surgery group (A) is greater than electively operated group (B) with Mean operative time in group (A) was 95 minutes and in group (B) was 60 minutes, similar to study carried by Malik Arshad[10]

although the group (B) gets twice admitted in the hospital but if we take under the consideration the post-operative time into consideration the hospital stay of group (B) is significantly lower than group (A). In the present study, an appendicular abscess developed in 17(6%) of the patients and all were managed with ultrasound-guided drainage. Failure of conservative treatment was encountered in 5 patients (2%) which is similar to study carried out by Ashok Koirala.[11] Regarding the operative and post-operative complications among both groups the emergency group was ahead in all respects (figures and tables 6a and 6b), similar observations were seen by E.S. Garba[12] where they observed that complication rate of about 36%, almost comparable to that for perforated appendicitis and Immediate surgery leads to dissemination of infection and intestinal fistula formation. This obviously seems to obviate the advantages enumerated above. The inflammatory appendiceal mass may be mistaken at surgery for a malignant tumour, occasionally leading to right hemicolectomy, these observations were also seen by Corfield L.[13] Nitecki.[14]

CONCLUSION

In our study of 356 patients, we have successfully managed 284 patients conservatively and subjected them to interval appendectomy. All patients who get admitted with the diagnosis of right iliac fossa lump must be subjected to all baseline and radiological imaging before labelling them as an appendicular lump and further subjecting them for conservative management so as to rule out other pathology. The patient should receive primary nonsurgical treatment with antibiotics and abscess drainage as needed. Emergency exploration of an appendicular lump should be avoided as it leads to dissemination of infection and intestinal fistula formation. After successful nonsurgical treatment, interval appendectomy is indicated.

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