The Professional Medical Journal
www.theprofesional.com

DOI: 10.17957/TPMJ/16.3433

ORIGINAL PROF-3433

APPENDICULAR MASS AND ABSCESS;

FREQUENCY AT TERTIARY CARE TEACHING HOSPITAL

zulfikar229@hotmail.com

Dr. Zubair Ahmed Yousfani[1], Dr. Ahsan Ali Laghari[2], Dr. Jabeen Atta[3], Dr. M. Siddique Khurram[4], Dr. Roohi Bano[5], Dr. Jamrose Durrani[6], Dr. Syed Zulfiquar Ali Shah[7]

1. Senior Registrar
   Department of Surgery unit-I
   LUMHS, Jamshoro
2. Assistant Professor
   Department of Surgery unit-I
   LUMHS, Jamshoro
3. Associate Professor
   Department of Obs & Gynae
   Bilawal Medical College,
   LUMHS, Jamshoro
4. Department of Medicine
   Liaquat University Hospital
   Hyderabad/ LUMHS, Jamshoro,
   Sindh, Pakistan
5. Department of Medicine
   Liaquat University Hospital
   Hyderabad/LUMHS, Jamshoro,
   Sindh Pakistan
6. Department of Medicine
   Liaquat University Hospital
   Hyderabad/LUMHS, Jamshoro,
   Sindh Pakistan
7. Department of Medicine
   Liaquat University Hospital
   Hyderabad, Sindh, Pakistan

Correspondence Address:
Dr. Syed Zulfiquar Ali Shah
House No: 279, Doctor's Colony
Hirabad, Hyderabad, Sindh, Pakistan
zulfikar229@hotmail.com

Article received on:
02/05/2016
Accepted for publication:
29/09/2016
Received after proof reading:
00/00/2016

ABSTRACT... Objectives: To determine the frequency of appendicular mass (tumour) and abscess at tertiary care teaching hospital. **Study Design:** Cross sectional descriptive study. **Period:** One year. **Setting:** Department of Surgery at Liaquat University Hospital Hyderabad / Jamshoro, a tertiary care teaching hospital. **Patients and Methods:** All the patients presented with pain in right iliac fossa were recruited for the study. The detail history was taken; clinical examination was done, while all the baseline and specific investigations were advised accordingly to explore the appendicular lump / abscess whereas the data was saved and analyzed in SPSS version 16 and the consideration for significance was p-value ≤0.05. **Results:** During one year study period total fifty patients were presented as appendicular mass and abscess, seventy percent appendicular mass presented with fever and 60% presented with vomiting. Regarding appendicular abscess 90% presented with fever and 30% presented with vomiting. The appendicular mass and appendicular abscess was identified in 32 (64%) and 18 (36%) cases with male population predominance. Out of thirty two patients of appendicular mass were managed surgically i.e. 16 cases were underwent for surgery immediately whereas rest of the 16 subjects were managed by Oschner Scherren regime and later date appendicectomy was performed. All 18 cases of appendicular abscess were managed by antibiotics drainage and these cases of appendicular abscess were nominated for interval appendicectomy 6-8 weeks later due to recurrent appendicitis. **Conclusion:** The appendicular mass and appendicular abscess are common disorders and the management tools varies accordingly from early appendectomy, conservative conventional management to interval appendectomy while the extraperitoneal drainage and interval appendectomy are useful tool for patients with appendicular abscess.

Key words: Appendicular abscess, Appendicular abscess, Appendectomy, Ultrasound drainage and Mass in right iliac fossa.

Article Citation: Yousfani ZA. Laghari AA, Atta J, Khurram MS, Bano R, Durrani J, Shah SZA. Appendicular mass and abscess; frequency at tertiary care teaching hospital. Professional Med J 2016;23(12):1489-1494. **DOI:** 10.17957/TPMJ/16.3433

INTRODUCTION

Appendicitis a major surgical emergency commonly found in upper and middle class persons might be due to rich diet of meat and deficient in cellulose.[1] Purgatives abuse and violent peristaltic effect cause inflamed appendix, perforation leading to appendicular lump or peritonitis.[2] After the attack of acute appendicitis, a tender lump can be felt at right iliac fossa with overlying musculature rigidity.[3] Mass is composed of the oedematous portions of small bowl, oedematous caecal wall and greater omentum.[4] By fifth day the lump organized with well margins while during 5-10 days the swelling either becomes increase in size leads to appendix abscess or reduces and disappears slowly as inflammation subsides.[5]

The diagnosis of appendicular mass is usually clinical and the biochemistry reveals increased leukocyte count.[6] Ileocaecal TB and tumours both can present as appendicular lump, so no response after appropriate and specific therapy gives the clue for alternate diagnosis.[7,8] The treatment of appendicular lump and abscess are consist on parameters as if appendicular lump exists with vital stability then standard approach is conservative called as Oschner-Sherren regimen.[9,10] This plan is based on the evidence that nature has already localized the lesion and

no need to disturb these components. Inadvertent surgical approach at this stage is dangerous, difficult and may be impossible to detect the appendix and can leads to faecal fistula formation occasionally.[11] Due to these logics the strategy should be to observe a rigid non operative lesion and also be prepared to intervene in emergency when natural and initial treatment options fails.[12]

Therefore, this study was planned and conducted to observe the frequency for appendicular mass and abscess at Liaquat university hospital Hyderabad / Jamshoro.

PATIENTS AND METHODS

This cross sectional descriptive study of one year was conducted in the department of surgery at Liaquat university Hospital Hyderabad / Jamshoro. All the patients presented with pain in right iliac fossa were recruited and enrolled in the study and were admitted in the ward and the detail history was taken; clinical examination was done, while all the baseline and specific investigations were advised accordingly. The inclusion criteria of the study were the subjects with appendicular lump and abscess identified during the period of hospitalization or follow up visits after conservative management. The ladies with disorders concerned to uterus were excluded from the study after the opinion taken form gynecologist. Similarly masses arising from anterior abdominal wall, TB at ileocecal junction (rule out by taken the opinion from physician) and the subjects with ectopic pregnancy, cancer of colon and known cases of inflammatory bowl diseases were also considered as exclusion criteria. The informed consent was taken from every patient to participate in the study meanwhile all the patients were managed accordingly. All the maneuvers were performed by the collaboration and coalition of whole research team and were in medical ethics. The data was collected on proforma designed for the study and was analyzed in SPSS 16, the frequency and percentage was computed while the mean ±SD was analyzed for numerical variables. The categorical variables were manipulated by chi-square and t-test and consideration for significance was p-value ≤0.05.

RESULTS

During one year study period total fifty patients were diagnosed as appendicular mass and abscess, seventy percent appendicular mass presented with fever and 60% presented with vomiting. Regarding appendicular abscess 90% presented with fever and 30% presented with vomiting. The appendicular mass presented with pain around umbilicus later migrated to right iliac fossa associated with nausea and vomiting. Majority (80%) cases of appendicular lump presented within six weeks duration. The pain was relieved usually by passing stools while the immediate appendicectomy was performed 16 cases whereas late appendicectomy was also performed in 34 patients. Out of thirty two patients of appendicular mass were managed surgically i.e. 16 cases were underwent for surgery immediately whereas rest of the 16 subjects were managed by Oschner Scherren regime and later date appendicectomy was performed. All 18 cases of appendicular abscess were managed initially by antibiotics followed by additionally ultrasound guided percutaneous drainage of the abscess and these cases of appendicular abscess were nominated for interval appendicectomy after 6-8 weeks because of recurrent appendicitis. In thirty two subjects of appendicular lump, immediate appendicectomy was performed in 16 cases, out of them two cases underwent local resection with end to end anastomosis as the mass was adherent and appendix couldn't be separated. The results are presented in Table I-V.

DISCUSSION

Regarding appendicular mass, all the patients presented to the hospital for pain associated vomiting more than six weeks duration. According to Ahmed I, et al[11] appendicular mass was more common in 2nd, 3rd and 4th decades of life. Male to female ratio was 19:4 (4.7:1). In current study majority of the patients were in 20-29 (36%) followed by 30-39 years of age (20%) with male gender predominance. On clinical examination all subjects were observed to have mass in the right iliac fossa.

		Gender		Total
		Male	Female	
AGE (yrs)	12-19	4	3	7
		12.5%	16.7%	14.0%
	20-29	12	6	18
		37.5%	33.3%	36.0%
	30-39	7	3	10
		21.9%	16.7%	20.0%
	40-49	3	3	6
		9.4%	16.7%	12.0%
	50-59	3	2	5
		9.4%	11.1%	10.0%
	60+	3	1	4
		9.4%	5.6%	8.0%
Total		32	18	50
		100.0%	100.0%	100.0%

Table-I. The Age and Gender Distribution
*P-value 0.04; statistically significant

		Disorder		Total
		Simple appendicular mass	Apendicular abscess	
AGE (yrs)	12-19	5	2	7
		15.6%	11.1%	14.0%
	20-29	11	7	18
		34.4%	38.9%	36.0%
	30-39	6	4	10
		18.8%	22.2%	20.0%
	40-49	4	2	6
		12.5%	11.1%	12.0%
	50-59	3	2	5
		9.4%	11.1%	10.0%
	60+	3	1	4
		9.4%	5.6%	8.0%
Total		32	18	50
		100.0%	100.0%	100.0%

Table-II. The age and clinical disorder

		Disorder		Total
		Simple appendicular mass	Apendicular abscess	
Gender	Male	21	11	32
		65.6%	61.1%	64.0%
	Female	11	7	18
		34.4%	38.9%	36.0%
Total		32	18	50
		100.0%	100.0%	100.0%

Table-III. The gender and the clinical disorder
*p-value 0.05; statistically significant

Disorder	N	Mean (yrs)	Std. Deviation	P-value
Appendicular mass	32	34.65	15.31	0.01*
Apendicular abscess	18	34.61	13.34	

Table-IV. The mean ±sd for age and the clinical disorder
*Statistically significant

Gender	N	Mean (yrs)	Std. Deviation	P-value
Male	32	35.09	14.81	0.04*
Female	18	33.83	14.29	

Table-V. The mean ±sd for age and the gender distribution
*Statistically significant

According to Tannoury J, et al on the 3rd day (rarely sooner) after the attack of acute appendicitis, a tender lump can be frequently felt in the right iliac fossa with rigidity.[12]

According to Nshuti R, et al, 38 out of 46 patients had rigidity and 43 out of 46 subjects had tenderness.[13] In present study all subjects had history of pain, fever and vomiting. According to Mahattanobon S, et al 55% of patients had febrile episodes with temperature >39°C.[14] In present study fever was observed in 70% and 90% patients with appendicular lump and abscess and 16 patients were treated conservatively by Ochsner-Sherren regimen i.e. nothing per oral, NG tube aspiration, antibiotics and IV fluids and rest of the 16 patients were immediately operated. According to Guven H, et al in 61.5% subjects had appendicectomy and in 15 % had underwent for right hemicolectomy.[15] Paudel GR, et al observed that conservative management of appendicular lump is successful and more suitable with low complication rates than early operative approach.[16] Adalla SA, detected that out of 30 patients, emergency and elective appendicectomy was performed in 02 and 03 patients while remaining 83% were managed conservatively.[17]

In present study the patients that were managed conservatively were advised to follow up for appendicectomy six weeks later and after elective appendicectomy the specimens were sent for histopathological examination and all were shown as chronic appendicitis.

Regarding appendicular abscess, 18 patients were identified and studied, of which majority of the patients were in 20-29 years of age with male population predominance. According to the study by Bradley EL et al,[18] et al mean age ± SD at which appendicular abscess identified was 37.75 ± 10.72 while in present study it was observed as 34.61±13.34. In present series the initial colicky pain followed by pricking / throbbing type with lump palpable and high grade fever in (90%) patients. Hurme T, et al, observed that out of 147 patients 31% subjects managed conservatively initially then had interval appendicectomy was performed while 12% had conservatively only.[19] In present study all 18 subjects had immediate drainage of abscess considered as a preparation for interval appendicectomy that performed after 6-8 weeks due to recurrent appendicitis with histopathology evaluation shown chronic appendicitis.

In current study, after extra peritoneal drainage 05(22%) patients had wound infection and after interval appendicectomy wound infection was identified in 07(39%) of patients respectively. In the study by Bradley EL, et al,[18] after initial extraperitoneal drainage 12% had wound infection and after interval appendicectomy the wound sepsis was observed in 20% of his patients.

CONCLUSION

The appendicular mass and appendicular abscess are common complications of appendicitis and the management tools varies accordingly from early appendectomy, conservative conventional management to interval appendectomy while

the antibiotics, ultrasound-guided percutaneous drainage of the abscess followed by interval appendectomy are useful tool to prevent recurrent appendicitis.

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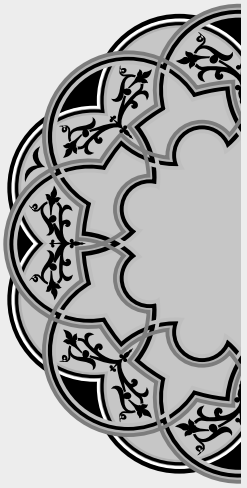

"Sometimes its not about backing man most likely to win.
Its about backing right man,
making sure he wins."

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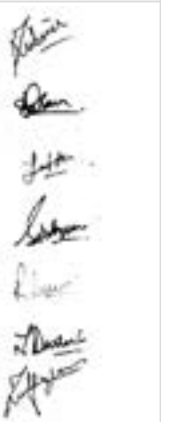
AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Zubair Ahmed Yousfani	Contributed to conception and design, acquisition of data, analysis and interpretation of data.	
2	Dr. Ahsan Ali Laghari	Drafting the article and shares its expert research opinion and experience in finalzing the manuscript.	
3	Dr. Jabeen Atta	Contributed in conception and interpretation of data and give his expert view for manuscript designing.	
4	Dr. M. Siddique Khurram	Analysis and interpretation of data contributed in conveption and shares its expert research opinion.	
5	Dr. Roohi Bano	Drafting interpreting and analyzing the data.	
6	Dr. Jamrose Durrani	Drafting, interpreting and analyzing the data.	
7	Dr. Syed Zulfiquar Ali Shah	Drafting and data collection and analysis / manipulate the data and drafting	