

A study of abdominal lumps, diagnostic evaluation and operative correlation

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Abstract

Aims: To study the pattern of presentation of various intra abdominal lumps. To study the frequency of involment of various system with age, sex predominance. To study the frequency of neoplastic and nonneoplastic lumps. To study the most useful diagnostic aids available and to correlate the provional and final diagnosis. To highlight in brief the rare conditions encountered in the study. **Materials and methods:** The inclusion criteria was pts present with any lump in abdomen with operable lumps who are otherwise fit. The exclusion criteria was unfit pts, Gynecological lump, pediatric lumps. **Observation and results:** Out of total 60 cases, there were 35 males and 25 females, the male to female ratio is 1.4:1. The youngest patient was 16 years old and oldest patient being 75 years old. The gastrointestinal system was most commonly affected i.e 33.34%, second most common was hepatobiliary system i.e 25%, followed by retroperitoneal lumps, genitourinary lumps i.e 16.66% each. The other intra peritoneal lumps which were not included elsewhere account i.e 8.34% of total patients in this study. There are rare cases such as splenic epithelial cyst, angiomyolipoma, mesentric cyst and also encountered. angiomyolipoma, mesentric cyst and splenic epithelial cyst also encountered. The USG, CT, MRI, Colonoscopy are complimentary imaging modalitis for evaluation of abdominal lump. USG was the first diagnostic investigation in all cases in our study. CT abdomen with contrast was more conclusive in defining the local extent and involvement of adjacent structure. **Conclusion:** In this study the incidence of male is more than female, the gastrointestinal system was most commonly affected. Neoplastic lumps accounted more than nonneoplastic lumps. USG, CT, MRI are complimentary imaging modalities for evaluation of abdominal lumps. FNAC cannot be relied upon completely for diagnosis while evaluating abdominal lumps.

Keywords: abdominal lumps, diagnostic evaluation and operative correlation.

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INTRODUCTION

With the increase in the degree of specialization, abdominal surgery is one of the main pre-occupations of the general surgeon. It is well known that abdomen is a 'mystery box' till the lid is opened at the laparotomy. Intra-abdominal lumps always pose a challenge to the clinician skills of the best surgeon. The etiology of the

lump could be widely different. At the one end of spectrum the palpable lump may be a normal organ or at the other end, especially with regards to neoplasia, may be indicative of fairly advanced disease. It is very important to evaluate any abdominal lump thoroughly preoperatively because rush to intervene surgically without proper evaluation and diagnostic laparotomy are not in the best interest of the patient.

MATERIALS AND METHODS

This is a hospital based prospective study with study population of about sixty pts presenting with intra abdominal palpable lumps, who underwent an operative intervention as a part of treatment were only included in this study. The inclusion criteria is pts present with any lump in abdomen with operable lumps who are otherwise fit. The exclusion criteria is pts unfit for general anesthesia, Gynecological lump, pediatric lumps and parietal wall lumps.

OBSERVATION AND RESULTS

Table 1: Distribution of lumps According to age, sex and systems

Systems	Male	Females	Total	Percentage
Gastro-Int.tract lumps	11	9	20	33.34%
Genito- Urinary lumps	6	4	10	16.66%
Retro-Peritoneal Lumps	6	4	10	16.66%
Hepato-biliary lumps	9	6	15	25%
Other intra Peritoneal lumps	3	2	5	8.34%
Total	35	25	60	100%

Out of total 60 cases, there were 35 males and 25 females the male to female ratio is 1.4:1. The youngest patient was 16 years old and oldest patient being 75 years old. The maximum patient belonging to age group of 30 to 39 years and 52 to 59 years i.e. 18.34% respectively. The gastrointestinal system was most commonly affected i.e. 33.34%, second most common was hepatobiliary system i.e. 25%, followed by retroperitoneal lumps i.e. 16.66% and genitourinary lumps i.e. 16.66%. The other intra peritoneal lumps which were not included elsewhere account i.e. 8.34% of total patients in this study.

Table 2: Distribution of pathological lesions of gastrointestinal lump according to age and sex

Sr. no	Pathological Lesions	M	F	Age group (years)							Total	%
				13-19	20-29	30-39	40-49	50-59	60-69	70 and ab.		
1	Carcinoma of stomach	5	3	-	-	2	1	3	1	1	8	40%
2	Carcinoma Of colon	3	2	-	-	2	1	2	-	-	5	25%
3	Leiomyo-sarcoma	1	0	-	-	-	1	-	-	-	1	5%
4	Ileocaecal TB	1	2	-	1	2	-	-	0	-	3	15%
5	GIST	2	1	-	0	-	1	2	-	-	3	15%
	Total	12	8	0	1	6	4	7	1	1	20	100%

There were 20 patients of gastrointestinal lumps out of 60 patients, out of 20 patient of gastrointestinal lump, there were 8 patients of carcinoma stomach i.e. is about 40%, 5 patients of carcinoma colon i.e. is 25%, 3 patients of GIST i.e. 15% and 3 patients of ileocaecal tuberculosis i.e. 15% were found.

Table 3: Distribution of neoplastic and nonneoplastic Genitourinary lumps

Sex	Neoplastic		Nonneoplastic	Total
	Benign	Malignant		
Male	1	4	1	6
Female	0	3	1	4
Total	0	7	2	10
Percentage	10%	70%	20%	100%

In there are 10 lumps from genitourinary system. Neoplastic lumps are 8 i.e. 80% out of which malignant lumps are 7 i.e. 70% of the total genitourinary lumps in our study while remaining 1 i.e. 10% is benign lump and 20% where nonneoplastic lumps.

Table 4: Distribution of pathological lesions of Genitourinary lumps according to age and sex

Sr. no	Pathological Lesions	M	F	Age group (years)							Total	%
				13-19	20-29	30-39	40-49	50-59	60-69	70 and ab.		
1	Renal cell Carcinoma(RCC)	4	3	-	-	0	1	5	1	-	7	70%
2	Angiomyo lipoma of kidney	1	-	-	-	-	1	-	0	-	1	10%
3	Hydronephrosis	1	-	-	1	0	-	-	-	-	1	10%
4	Pyonephrosis	-	1	-	-	-	-	-	1	-	1	10%
	Total	6	4	0	1	0	2	5	2	0	10	100%

Out of 10 cases of genitourinary system 7 i.e. 70% belonging to RCC with male to female ratio is 1.33:1. One case of angionmyolipoma, hydronephrosis and pyonephrosis i.e. 10% each of total genitourinary lumps. The maximum no of cases RCC were found in 50 -59 age group with male to female ratio 1.33:1. In Hepatobiliary lumps.

Table 5: Distribution of neoplastic and nonneoplastic Hepatobiliary lumps

Sex	Neoplastic		Nonneoplastic	Total
	Benign	Malignant		
Male	1	5	4	10
Female	1	1	3	5
Total	2	6	7	15
Percentage	13.33%	40%	46.66%	100%

There were 15 lumps arising from hepatobiliary system, which constitute about 25% of total lumps in our study. The neoplastic lumps are about 53.33% and nonneoplastic lumps are about 46.66%. In which 46.66% of liver hydatid cyst, 26.67% of gall bladder lumps and 26.67% hepato cellular carcinoma were diagnosed. In Retroperitoneal lumps

Table 6: Distribution of neoplastic and nonneoplastic Retroperitoneal lumps

sex	Neoplastic		Nonneoplastic	Total
	Benign	Malignant		
Male	1	3	2	6
Female	1	1	2	4
Total	2	4	4	10
Percentage	20%	40%	40%	100%

There are 10 lumps arising from retroperitoneum in our study which constitute about 16.6% of total lumps in our study out of which neoplastic retroperitoneal lumps are 60% of which malignant lumps were 40 % and 40% were nonneoplastic lumps. In Other intraperitoneal lumps

Table 7: Distribution of pathological lesions in other Intraperitoneal lumps according to age and sex

Sr. no	Pathological lesions	M	F	Age group (years)							Total	%
				13-19	20-29	30-39	40-49	50-59	60-69	70 and ab.		
1	Mesenteric cyst	2	1	-	-	1	-	2	-	-	3	60%
2	Splenic epithelial cyst	1	1	-	2	-	0	-	0	-	2	40%
	Total	3	2	0	2	1	0	2	0	0	5	100%

There are 5 patients, 3 man and 2 female in our study presented with lump in abdomen with no other symptoms. These lumps not included in any other category while classifying abdominal lumps. In 3 mesenteric and 2 two splenic epithelial cyst were found.

Diagnostic investigation

1980. New literature have focused on evaluation of abdominal lumps using USG, CT, MRI and FNAC. The USG, CT and MRI are complimentary imaging modalities for evaluation of palpable abdominal lump. The use of diagnostic imaging in evaluating abdominal lumps has been written since the USG was the first diagnostic investigation in all cases in our study. It is highly determine the organ of origin of abdominal lump. It differentiates solid from cystic lump. Difficulty with USG abdomen encountered mostly in retroperitoneal lumps. Easy availability of USG made it first diagnostic investigation in preoperative evaluation of all abdominal lumps in this study. USG is an operator dependent technique. The abdominal radiograph has limited role in evaluation abdominal lumps. CT abdomen was done were preoperative assessment of the extent of spread of lesion i.e. staging was important, like in cases of retroperitoneal lumps it was also done in cases where diagnostic dilemma persisted even after clinical assessment and ultrasonography of the abdomen. CT abdomen was with

contrast was more conclusive in defining the local extent and involvement of adjacent structure. In our study MRI is used to evaluate complex lesions not definitely characterized by USG or CT. MRI lacks ionizing radiation and MRI excels in specifically characterizing fat, fluid, blood product and metal. MRI has advantages in radiation sensitive patient population when the USG findings are non diagnostic. FNAC was conclusive for most cases, but there were instances in cases of some abdominal lumps were in even after repeated FNAC the report was non conclusive. Exploratory and final histopathology report eventually confirmed the diagnosis in those cases.

CONCLUSION

In this study the incidence of male is more than female, the gastrointestinal system was most commonly affected, the second most common was Hepatobiliary system, followed by retroperitoneal lymph and genitourinary system. Neoplastic lumps accounted more than nonneoplastic lumps. There are rare cases such as angiomyolipoma kidney, mesenteric cyst and splenic epithelial cyst also encountered. Diagnostic investigation like USG, CT, MRI are complimentary imaging modalities for evaluation of palpable abdominal lumps. Abdominal radiography studies have limited role for the

diagnosis of palpable abdominal lumps. USG is the first line imaging modality when ionizing radiation from CT is of particular concern. FNAC was conclusive in most of cases, there are incidences it was nonconclusive even after repeated aspiration. This suggest that FNAC cannot be relied upon complimentary for H.P diagnosis while evaluating abdominal lumps.

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