Pak Armed Forces Med J 2005; 55(4): 310-313

RECURRENT ACUTE / CHRONIC APPENDICITIS AN INDEPENDENT CLINICAL ENTITY

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ABSTRACT

A multicenter descriptive study was carried out at CMH Abbottabad and PAF Hospital Sargodha. (Both hospitals are secondary referral centers) to determine whether chronic and recurrent appendicitis really exist in our population or not. Duration of study was from Feb 1996 to May 2001. All patients who under went appendicectomy were included in the study and were divided into two groups, Group A with first episode of appendicitis and Group B with 2 or more episodes of abdominal pain. The patients were followed up for the relief of symptoms and this was assessed against the histological evidence of appendicitis. A total of 525 patients were included in the study out of which 67 had recurrent abdominal pain that was relieved after appendicectomy. The no of patients operated for recurrent abdominal pain fell with each passing year at both centers. However the annual number of patients undergoing appendicectomy remained same through out the study period at both centers. It is concluded that in the evaluation of a patient with abdominal pain, a history of prior similar episodes of pain should never dissuade one from considering the diagnosis of recurrent acute appendicitis or chronic appendicitis.

Keywords: Appendicitis, recurrent, chronic

INTRODUCTION

Acute appendicitis is a well known clinical entity, but many physicians are unwilling to accept appendicitis as a chronic or recurrent illness [1], Episodic abdominal pain is a common clinical problem. It can be a diagnostic and therapeutic conundrum when the surgeon encounters it acutely in the emergency department. Appendicitis is often excluded from the differential diagnosis because the natural history of appendicitis is usually appreciated as acute, progressing to some degree of peritonitis quite rapidly and inevitably. However, recurrent and chronic forms of appendicitis occur also and can mislead the clinician [2]. Especially in children and adolescents the right lower quadrant abdominal pain and the "chronic" appendicitis are frequently connected with a lot of different diagnostic problems for the treating physician [3]. This may well be because of the fact that those having chronic and recurrent appendicitis represent a small portion of patients with disorders of the appendix [4].

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It is very cautiously believed that recurrent appendicitis exists and affects at least 6.5 per cent of those who ultimately have an inflamed appendix removed [5]. Although this small proportion of the patients may not be very significant for the surgical practice itself but when the things are considered in terms of loss of manpower hours due to hospital admission and the hospital expenditure, especially in the settings where these are borne by the state, the projected Figure needs consideration. The chronic appendicitis may not only be because of the continuation of a subclinical inflammation or a result of an acute appendicitis treated conservatively and inadequately. This

dilemma is suspected to be high in the settings where an overconcious surgeon in an attempt to keep a negative appendicectomy rate low omits the mild attacks of appendicitis. Rare finding of Erythema annulare centrifugum (EAC), a chronic figurate eruption, may be helpful for a vigilant surgeon [6].

Chronic appendicitis may be the cause of recurrent abdominal pain. This hypothesis is the subject of controversy. The aim of the present study is to clarify the possible existence of a chronic inflammation of the appendix by a clinical and histopathologic study.

PATIENTS AND METHODS

The study was carried out for 06 consecutive years in two different centers, both of which are class B Hospitals. First center was CMH Abbottabad from Feb 1996- Feb l999 and the 2nd center was PAF Hospital Sargodha May 1999- May 2001. Patients belonging to either sex, race or social class who presented with pain abdomen and in whom appendicectomy was performed subsequently were considered for the study. All serving soldiers and dependant families were included in the study. Among retired soldiers and their families were only those were included who were totally dependant on these Hospitals for their treatment. Patients having a choice of Hospital were excluded from the study e.g. the non-dependants and the private patients. The history sheets and subsequent histological reports were obtained and scrutinized. The study was carried out for three consecutive years at each centre. All the data was collected under the headings mentioned in (table-1). and were graded further according to the criteria mentioned

This is a descriptive study in which patients were divided into two groups on the basis of presentation of the patients. On the basis of the presentation the patients were divided into two groups. Group A was the subset of patients in which it was the first episode of pain. Those having a second or subsequent episode of pain were classed in Group B. The rate of negative appendicectomy was especially studied so as to judge the accuracy of the decision and also compare the two groups.

STATISTICAL ANALYSIS

Results were described through percentages separately for both the groups using SPSS version 10.0.

RESULTS

There were a total of 525 patients considered in our study. Out of these 264 patients were attended at CMH Abbottabad and the rest of the patients were operated at PAF Hospital Sargodha. Both are secondary referral centres. The detailed breakdown of the patients at both centers is tabulated in (table-2). The operative results of Group A are listed in (table-3) and those of Group B were listed in (table-4). We did not encounter Erythema annulate centrifugum in any of our patients.

DISCUSSION

Recurrent acute appendicitis and chronic appendicitis are not very established headings. Mostly a recurrent abdominal pain is categorized as acute appendicitis, irrespective of its recurrent nature. Many a times treated as a medical abdomen and sometimes the entity is negated as such. However it is a feet that times and again one finds patient lurching in the surgical OPD with chronic abdominal pain and is actually suffering from chronic appendicitis.

In our study we have found that there is a subset of patients in sample population who are suffering from recurrent acute appendicitis. These patients do form a part of the OPD patients. Once treated with appendicectomy such patients are relieved of their symptoms. It may be argued that these patients may have been suffering from some psychiatric illness. But the consistent histologic rinding of appendicitis has proved that they actually had appendicitis. These

Table-1: Points of evaluation

Criteria		Sub categorization	
a.	Number of episodes	i.	1st episode
		ii.	2nd or subsequent episodes
b.	Operative findings	i.	Appendicitis
		ii.	Signs of inflammation but normal looking appendix
		iii.	Normal appendix
c.	Histological diagnosis	i.	Appendicitis
		ii.	Normal appendix

Table-2: Total number of patients

		(Group A) Operated after 1st episode of pain	(Group B) Operated after 2nd or more episodes of pain	Total patients of clinical diagnosis of appendicitis	Patients preoperative or histologically confirmed to have appendicitis	Patients found negative for appendicitis both preoperative and histologically	Net rate of normal appendix appendicectomy (% age)
1st center	1st year	79	18	97	88	9	9.27
	2nd year	77	11	88	80	8	9.09
	3rd year	76	3	79	71	8	10.12
2nd center	4th year	75	19	94	84	10	10.63
	5th year	78	7	85	77	8	9.41
	6th year	73	9	82	74	8	8.53
Grand Total		458	67	525	474	51	9.52

Table-3: Results in group A operated after 1st episode of pain

		Total patients	Histological evidence of appendicitis	Patients who under went normal appendix appendicectomy	Rate of normal appendix appendicectomy (% age)
1st center	1st year	79	72	7	8.86
	2nd year	77	70	7	9.09
	3rd year	76	68	8	10.52
2nd center	4th year	75	68	7	9.33
	5th year	78	71	7	8.97
	6th year	73	67	7	8.21

Table-4: Results of group B operated after two or more episodes of pain

		Total patients	Histological evidence of appendicitis	Patients who under went normal appendix appendicectomy	Rate of normal appendix appendicectomy (% age)
1st center	1st year	18	16	2	11.11
	2nd year	11	10	1	9.09
	3rd year	3	3	0	0
2nd center	4th year	19	16	3	15.78
	5th year	7	6	1	14.28
	6th year	9	8	1	11.11

results also indicate the fact that there has been a fairly constant rate of acute appendicitis in the sample population whereas the subset of patients suffering from recurrent acute or chronic appendicitis kept on decreasing after the institution of appropriate treatment Le. appendicectomy. This fact too has got its support as the rate of

negative appendicectomy has remained fairly constant throughout our study.

We have found an interesting finding that is supported by our data. This may also be because of the peculiar circumstances of our study setup. Our patient is completely dependant on us for all sorts of treatment and these dependant patients would never go to any surgeon outside the military hospitals. The important figures this data reflects support the fact that due to a very restricted approach for appendicectomy and an overcautious surgeon, the incidence of chronic appendicitis increases. Although the approach to treat a mild acute appendicitis conservatively may be successful as has been demonstrated by Migraine S et al [7] but in our country such facilities are not available widely for the follow up as is indirectly depicted by our study.

In a study conducted by Mussack T et al [8] on patients of chronic appendicitis it was found that three quarter of all patients with pain in the right lower quadrant but no significant signs of inflammation showed the histological criteria for chronic appendicitis. An optimal cut-off value of 7 days preoperative period of pain was able to suggest a histologically non-acute appendicitis with a high specificity and a high positive predictive value. More than 93% of these patients were asymptomatic in their long-term follow-up [8].

The total figure of the chronic appendicitis may appear to be low in our study but we believe that it is just the tip of the iceberg and that the actual figure of chronic appendicitis in the population is much higher especially in the under treated and in the under privileged segments of our society.

CONCLUSION

Acute appendicitis can resolve spontaneously or recur repeatedly in the same individual. Therefore in the evaluation of a patient with abdominal pain, a history of prior similar episodes of pain should never dissuade one from considering the diagnosis of recurrent acute appendicitis or chronic appendicitis. These should always be considered in the differential diagnosis of recurrent pain in the lower abdomen and patients with mild episodes should be treated early lest they develop chronic appendicitis.

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