Epidemiological variation in acute appendicitis regarding incidences and causes

Hussein Taher Abbas AL-Baaj*

الخلاصة

هدف الدراسة هو تبيان فيما اذا كان مرض التهاب الزائدة الدودية في مدينة الديوانية له ميزة مختلفة عن ما اظهرته الدراسات في اماكن اخرى من ناحية الفئات العمرية والجنس والاسباب .

أجريت الدراسة في مستشفى الديوانية التعليمي من خلال 140 مريض مصابين بالتهاب الزائدة كما مدعم بمشاهدة الزائدة اثناء العملية وقد استغرقت الدراسة عامين وانتقت العينة بطريقة عشوائية. وقد كانت النتائج 64 حالة هي بين سن 12-25 عام وقد تساوت الأصابة بين الجنسين ولكن نسبة الذكور تزايدت بعد سن ال25 سنة لتصل الى 38 من أصل 55 حالة.

10% من الحالات حصلت لها مضاعفات وخصوصا عند الأطفال.

كما أظهرت الدراسة أن مرض التهاب الزائدة يصيب الذكور أكثر بنسبة 70% بعد سن 25 وقبل سن 12 عام وتتساوى الاصابة بين سن 12-25 مغاير للأحصائيات الأخرى وهذا ربما ناتج من سلوك مختلف للمرض في المكان الذي اجريت فيه الدراسة كما اظهرت ان 27% من الحالات هي التهابات زائدة متكررة سببها انسداد ليفي خصوصا في ما بعد الثلاثين من العمر وهو الاكثر شيوعا من اسباب انسدادها الاخرى بل اكثر شيوعا من انسدادها بسبب ما يسمى بالفيكولث وهي عبارة عن جسم داخل الزائدة متكلس فيما اظهرت ان نسبه 10% من الحالات ادت الى مضاعفات نتجت من ثقب في جدارها وهي مشابه للنسب في اماكن اخرى .

Abstracts

This study in epidemiology and causes of acute appendicitis in our city (aldywania) to show the difference in the incidence and causes and complications of the disease in comparison with international study.

Material and methodies: prospective study collect 140 cases of approved appendicitis randomly during two years .

Results:

64 cases are between 13- 25 years and half of them are males while the incidence of males in above 25 years 38 of total 55 cases.

36 cases of obstruction are cause by fibrosis while 32 cases are cause by fecolith.

14 cases are perforated.

*Medical College of Al-Quadisia University

Discussion

Our study show difference in incidence of disease in that it is common in males above 25 year and below 12 years about more than 70% of cases are males while equal incidence between males and females between 12 -25 years paradoxical to international study. Also show the fibrosis of previous attacks is the commonest causes of obstructed type in age above 30 years and fecolith is second to it which is the commonest cause of obstructive appendicitis in the international study. Recurrent appendicitis form about 27% of causes so it is good practice to operate in all cases of acute appendicitis whatever it is mild to prevent more sever attack of recurrence due to obstruction induce by fibrosis.

Conclusion

27% of cases are recurrent and the commonest cause of obstruction is old fibrosis and the disease is more common in males in age after 30 years and before 12 years.

10% of cases complicated by perforation mainly in children.

Introduction

Rare in infants and after middle age and a peak incidence in the teens and early 20s. In which male to female ratio is 3/2 but at 25; thereafter the greater incidence of male declines [1]. While our study show completely different result in that the disease equally affect males and females between 12 -25 years while affect males predominantly before and after this age. and still the disease is rare in age group less than 5 years .There is a slight male: female predominance (1.2 to 1.3 :1). while in our study male to females predominance (1.59 :1) [2,3]10% of cases complicated by perforation which is similar to our finding and mainly in children [4.5.6]. While other study show different result i.eThe overall rate of perforated appendicitis is 25.8% children less than 5 years of age and patients more than 65 years of age have the highest rates of perforation (45 and 51 %, respectively)…[7,8]Our study show the high incidence of perforation in children above 5 years to 12 years which consist

40% of cases of perforation. The disease is very rare in age below 5 years above 55 years so that not recorded in this age in our study Our study show the commonest cause of obstruction is fibrosis due to previous episodes of inflammation which is not necessary associated with sever attack that is , it may be so mild that patient forget it. Recent studies suggest that ,in selected patients , observation and antibiotics therapy alone may be an appropriate treatment for acute appendicitis,[9,10]. While our study show 27% of cases recurrent sever attack s duo to narrowing by old fibrosis so even the patient pass the attack of appendicitis with antibiotic treatment ,the patient may heal by fibrosis so liable for new attacks in future which is more sever. In simple appendicitis 40% cause by fecolith while in perforated appendicitis 90% causes by fecolith[5]. our study show same figure in female while in males cases only 50% of perforated appendicitis contain fecolith. Two cases are caused by tumor and in both cases the patients suffered from abdominal pain since long time, the histopathology show mucious adenocarcinoma [11,12]so this is the commonest type of primary tumor while carcinoid tumor is not reported in this study .

Materials and methods

prospective study that collects 140 cases of approved appendicitis by operative finding randomly which is done in aldywania hospital on November 2011 to February 2013.Appendix is immediately bisect and gross pathology is studied in detail so not include in the study the appendix not show gross pathology of appendicitis ,and because it is not easy to differentiate obstruction that induce by lymphoid follicles on gross pathology so classified this type with non obstructed type, Ranges of ages nearly between 5 -55 years.

Results

of 140 cases, 86 are males while females are 54 cases.55 cases at age 25 years and above, 38 of them are males. Of 64 cases between 13 -25 years 31 males and 33 are females9 cases of total 14 case of perforated appendicitis are with fecolith All females (5 cases) with

perforation, appendix contains fecolithes.27 cases with impending perforation, 22 cases are males and 5 female's cases, of these 5 females 4 are with fecolithes while of 22 males 11 cases with fecolithes.2 cases are malignant and hemicoloectomy are done according to operative finding and confirm by histopathology 56 cases are not obstructive at least by fecolithes or fibrosis or foreign body or fecal material.36 cases are fibrotic obstruction.32 cases are with fecolithes 8 cases, appendix full with fecal material2 cases with malignant tumor.One case with worm. No case with food particles like vegetable seeds.Above 30yeares 27 males of 38 total cases.

Table 1 show the difference in sex incidence according to age group

Age	Male	1- Female
Below 12 years	17	4
13-24 years	31	33
25 years and above	38	17
Total	86	54

The table 2 show etiological factor in non-perforated appendicitis according to the age.

Age incidence	Non-obstructive	Obstruction by fecolith	Obstruction by fibrosis	Miscellaneous
Above 30 years Total are 35 cases	16	6	12	1 case fecal material distended distal part
20-30 years Total are 43 cases	17	13 6 with fibrosis also	15	1 mucinious adenocarcinoma 3 Distended with fecal material
13-20 years 33 cases	12	10	7	4 cases appendix full with feces
Up to 12 15 cases total	10 55	2 31	2 36	1 by worms 10

Discussion

36 cases are cause by fibrosis and 32 are cause by fecolith so the fibroses specially in above 30 years is the commonest cause of obstruction while the fecoilth is of less importance in age above 30, only one case of 10 with appendicitis above 40 years is caused by fecolith and this finding explain by that not all cases of appendicitis operated in first attack which accumulate with time. so it is good practice to operate in all cases of appendicitis whatever it is mild to prevent recurrence which are more sever and more frequent in old age.The effect of fecolith on severity of attack is more in females all 5 females' cases with perforation are with fecolith while half male's cases with perforation caused by fecolith.In impending perforation in females 4 of 5 , the appendix contains fecolith while half of 22 males with impending perforation are with fecolith.Impending perforation more in males, more than 80%.50%of 31 cases with perforation and impeding perforation contain fecolith in males while 90% of 10 female's cases contain fecolith.So the effect of fecolith on severity of attack is more clear in females rather than males.The value of gender on the incidence is not significant between 13-25 years which form about 50% of total cases but before and after this age become more significant, in more than25 years about 70% in males and 80% in males up to 12 years only 2 cases of total 10 cases are female and 8 males in 40 years paradoxical to other study which show decline in predominance of males after 25 years .10%are perforated and the shortest time between abdominal pain and perforation is 18 hours and certainly the perforation as event occurs before that time .Despite high incidence of simple appendicitis and impending perforation in males ,the incidences of perforating are equal in them after 12 years and the females more liable for perforation if get sever attack while males tolerate sever attack more than females .

Conclusions

1- Appendicitis is equally affect males and females in age group 12-25 years while the incidence in males above 25 years increase to form about 70% , and 80% in up 12 years

2- The stenosis produced by fibrosis is important cause in acute appendicitis especially after 30 years so it is important to operate on appendicitis whatever it is mild to prevent sever presentation in future .27%of cases are recurrent despite the our approach in operating in all cases of acute appendicitis .So it is good practice to adopted surgery even in mild, transient attack in males to prevent recurrence

3-fecolith obstruction is more risky in females 90% while of less importance in males 50%.

4-high incidence of appendicitis in males after 25 years reflect in high incidence in impeding perforation rather than in perforation which is equal so males cases tolerate the attack more than female in form of perforation.

5- 30% of cases presented below 12 years complicated by perforation which form about 40% of total perforation.

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