



A Descriptive Retrospective Review of 152 Appendectomies in Enugu Nigeria from January 2001 to 2009

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ABSTRACT

A retrospective review of 152 appendectomy specimens collected during a 9 year period from January 1, 2001 to December 30th, 2009 to establish the pathologies seen in them. Slides of all patients who underwent appendectomy were reviewed retrospectively noting their ages, sex and diagnosis. The results were analyzed using simple percentage and presented clearly to reflect the type of pathology involved. One hundred and fifty two appendix specimens were received, 67 were from females (44.1%) while 85 were from males (55.9%). The pathologies seen were acute and chronic non specific appendicitis 82(54%) presenting at a mean age of 19.9 years SD 9.12. Normal appendix from incidental appendectomies were 56 (36.8%) and presented at a mean age of 20 years SD 8.24. No diagnosis was recorded for 8 specimens (5.2%). Schistosomal appendicitis had a frequency of 4 (2.6%), all males with a mean age of 24 years. Carcinoid was 1(0.7%) in a female of 27 years. Tuberculous appendicitis was 1 (0.7%), in a male of 33 years. Appendicitis which is the commonest cause of symptoms leading to appendectomy appears to be a disease of the young predominantly, with a slight male preponderance here. Acute appendicitis is the main lesion seen while other pathologies include Schistosomiasis of the appendix, Carcinoid and tuberculosis of the appendix.

INTRODUCTION

Appendiceal pathologies warranting appendectomy are not uncommon in our environment. This study shows the most common pathology in all appendectomy specimens received to be acute and chronic appendicitis. The incidence of appendicitis here is not known, as no community based study to the best of our knowledge has been documented. Figures from the United States point to values of 1.5 and 1.9/1000 in males and female population's respectively [1]. The mean age of presentation of appendicitis in United States was also reported to be 28 years in one study [2]. It was Fitz who recognized and reported acute appendicitis as a distinct entity in 1886 [3]. The histological criterion for the diagnosis of acute appendicitis is neutrophilic infiltration of the muscularis propria [4].

In this study we have showed the various lesions associated with appendectomy as a baseline prevalence data for our environment. We also make a case that the attitude of discarding appendectomy specimen which is still prevalent in our environment should be discontinued.

METHODS

Slides of all patients who underwent appendectomy were reviewed retrospectively noting their age, sex and diagnosis. The results were analyzed using simple percentage and presented clearly to reflect the type of pathology involved.

RESULTS

One hundred and fifty two appendix specimens were received, 67 were from females (44.1%) while 85 were from males (55.9%). The mean age for the presentation of symptoms necessitating appendectomy here was found to be 19.9 years SD 9.12 years. For males their mean age for having appendectomy done was found to be 21 years SD 9.36 years. For females their mean age for having an appendectomy was also found to be 18 years SD 9.28 years so they are at least most likely to present one year earlier than their male counterparts.

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TABLE 1.

Pathology	Sex		Average Age (Both Sexes)	Standard Deviation
	Female	Male		
Acute /Chronic Non specific Appendicitis	33	49	19.9	9.12
Schistosomal Appendicitis	-	4	24	2.0
Carcinoid	1	-	27	-
Tuberculous Appendicitis	-	1	33	-
No diagnosis	4	4		
Normal Appendix	30	26		
TOTAL	68	84		
	152			

DISCUSSION

As we found here acute appendicitis has been described elsewhere mainly as a disease of the adolescents and young adults, but may occur at any age [2,4]. Our findings of a slight male preponderance are in keeping with other reports elsewhere [4]. Significantly acute or chronic appendicitis which was the most common lesion seen presented at a mean age of 19.9 years SD 9.12. This observation agrees with existing literature which depicts acute appendicitis as a disease of adolescents and young adults [4]. One report by Zulfikar et.al and Ojo et.al suggests that the highest occurrence of appendicitis to be in the second and third decades of life, earlier than our report suggests [5,6]. At the earliest stages, only scant neutrophilic exudates may be found throughout the mucosa and submucosa, and muscularis. Submucosal vessels are congested often with perivascular neutrophilic infiltrates. The normally glistening serosa is dull and this may be reported by the pathologist at this stage as normal whereas in fact the lesion is just beginning at the earliest stage [4]. This phenomena may account for some of the so called false negative cases of appendix examined after surgery. Later more prominent neutrophilic exudates generate fibrinopurulent reaction over the serosa. As the inflammation progressively worsens, there is abscess formation within the wall, along with ulcerations and green black gangrenous appendicitis. Classically acute appendicitis produces periumbilical pain which later localizes to the right lower quadrant, nausea and vomiting, abdominal tenderness in the region of the appendix and mild fever [4]. But this classic presentation is often not the case.

The histopathological examination of the appendix has been observed to serve two purposes [5]. First it allows the diagnosis of acute appendicitis to be confirmed. Second histopathological examination may disclose additional pathologies that may not be evident intraoperatively which may impact patient management [7]. Patient's symptoms also has been frequently disappear post operatively even with negative histopathologies [5]. It has been suggested that in these cases there may be an early sub clinical appendicitis at micro cellular level especially as mentioned above if the disease is at the earliest stage. This indicates that it is not possible to make an accurate macroscopic assessment of appendiceal inflammation emphasizing more on importance of histopathology [8]. Normal appendix was observed in the settings of incidental appendectomies for unrelated surgical problems. Other lesions were appendiceal Schistosomiasis which classically mimicked appendicitis in males at a mean age of twenty four years. A case of Tuberculosis of the appendix was seen in a 33 year old male. While Carcinoid was the only true neoplasm was seen in a 27 year old female. Carcinoids are reported to be the most common tumor of

appendix and are typically small, firm, circumscribed yellow-brown lesions [9]. Diagnosis was made after appendectomy and histological examination meaning that the common symptoms of flushing and diarrhea were absent. The reported incidence of carcinoids in several studies ranges from 0.02 to 1.5% of surgically removed appendices [10-11].

Finally in conclusion Appendicitis which is the commonest cause of symptoms leading to appendectomy appears to be a disease of the young predominantly in our environment, with a slight male preponderance here. Acute appendicitis is the main lesion seen while other pathologies include Schistosomiasis of the appendix, Carcinoid and tuberculosis of the appendix whose diagnosis can only be made by histology making good sense, the suggestion that the culture of routinely discarding appendix specimen should be discontinued as even appendix carcinoid here was silent clinically. Also Tuberculosis as well as Schistosomiasis presented in a way clinically indistinguishable from appendicitis making histopathological examination the only option for making definitive diagnosis.

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