

Verification and Extension of the Glasgow Western Infirmary based Theory of Limited Acute Appendicitis using a Nigerian Hospital

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Abstract

A study carried out at the Glasgow Western Infirmary postulated that acute appendicitis is classifiable histologically into "limited" and "complete" types, and demonstrated that the radicalness of surgeons affected the proportion of limited acute appendicitis diagnosed in that hospital. This classification was verified personally with a consecutive series of appendectomies performed by three German doctors on 79 Igbo patients at a Mission Hospital in Nigeria. In this ethnic group, the proportion of limited acute appendicitis was found to be higher than the Glasgow findings. Now, the Ibos are aware of and dread appendicitis, which they call "etuto afo", i.e., intra abdominal abscess. Therefore, awareness of the patients themselves is another factor which affects the proportion of limited acute appendicitis diagnosed in a hospital.

Keywords

Glasgow Western Infirmary; Appendicitis; Nigerian Hospital

Introduction

Appendicitis is regarded as a rare but changing entity in the rural African [1]. In this connection, there is at least one largely rural community in Africa in which appendicitis is fairly common. I refer to my own people, the Ibos [2], a major ethnic group in Nigeria, West Africa.

The Ibos call appendicitis "etuto afo", namely, intraabdominal abscess. "Is it appendicitis, doctor?" This question, articulated or muted, frequently accompanies a dreaded symptom-severe abdominal pain. Indeed, Ibo patients often accost doctors with the diagnosis of appendicitis! In the circumstances, I believe that the Ibos constitute a veritable community for testing and extending the interesting theory of acute appendicitis which Howie [3] postulated at the Glasgow Western Infirmary.

Howie [3] studied the appendices removed during a period of 9 months from 460 patients aged above 12 years and postulated that acute appendicitis should be classified histologically as either "limited" or "complete". He defined the former class in terms of cases in which "the acute inflammatory exudate (polymorphonuclear leucocytes) is found mainly in the lumen and mucosa and does not extend deeper than the mucosa." In his view, "the proposed division of *limited* from *complete* acute appendicitis is not difficult; and from this starting point useful clinicopathological research might well proceed."

Howie [3] himself showed one research-worthy facet by demonstrating that surgical units favouring a radical approach to suspected appendicitis removed more appendices with limited acute inflammation than did conservative units, the respective figures working out to 8.2% and 6.8%. In other words, there is a corollary to his main theory. It may be stated thus: the proportion of limited acute appendicitis in a community varies according to the radicalness of the surgeons themselves.

The present paper suggests another corollary: the proportion of limited acute appendicitis in a community varies according to the awareness of the sufferers themselves.

Methods

On June 9, 1973, the leader of a German team of medical missionaries working at the St. Charles' Borromeo Hospital, Onitsha, visited my Enugu based government laboratory to discuss the prevalence of appendicitis in Igbo patients. We decided on a collaborative pathological, clinical, and epidemiological study. Three days later, appendix specimens obtained at emergency, elective or incidental appendectomy began to arrive.

Each specimen was submitted with a clinical summary. All the specimens were examined personally, a single transverse block being taken from each third of the organ for histology. The series ended on February 20, 1974, when one of my German collaborators was struck dead by lassa fever. I have reviewed alone our collected materials which were classified using Howie's above criteria [3].

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Results

Over the period of nearly 9 months, 79 appendices were examined. They came from 51 emergency, 21 elective, and 7 incidental appendectomies. Table 1 summarizes the age and sex distribution. It is apparent there from that the age peak occurred in the 10-19 year range and that females slightly outnumbered males.

Limited acute appendicitis was diagnosed in 15 cases (18.8%) and complete acute appendicitis in 16 cases (20%). None of the 7 cases of incidental appendectomy showed acute inflammation. Among the interesting cases seen in the series were the following: obliterative fibrosis of the lumen 7, gangrene 3, schistosomiasis 2, and perforation 1.

Age group	Male	Female	Total
0-9	1	1	2
10-19	11	25	36
20-29	9	6	15
30-39	7	6	13
40-49	4	3	7
50-59	4	1	5
60	0	1	1
Total	36	43	79

Table 1: Distribution by age and sex of Ibo patients who underwent appendectomy

Discussion

Patients' awareness of appendicitis is a salient feature of the clinical practice in Iboland. In this connection, the letters of readers published in local newspapers reflect the heightened awareness of appendicitis among the general public. Two examples suffice. Anonymous [4] wrote: "I wish to draw the attention of East Central State Ministry of Health to the disease, appendicitis, which is now rampant in schools. I am saying this because of what is happening in my area." Anonymous [5] was equally concerned with: "Observations show that two ailments-appendicitis and hernia have increased. In my village, for instance, more than 50 people were operated upon for these ailments within a year. What an alarming figure."

It seems to me that the relatively high proportion (18.8%) of limited acute appendicitis found in the present study is due to the tendency of Igbo patients not only to take abdominal pain seriously but also to seek operative treatment quickly. A working hypothesis is that, in any community, low awareness of appendicitis or slow attendance at hospitals would favour the presentation of appendicitis during the complete rather than the limited stage of the disease. Thus, in earlier reports from other Nigerian centers [6,7], perforation and gangrene were the late and notable features.

Unfortunately, as an aftermath of Lassa fever in the community, one of my collaborators died and I could not pursue the clinical and epidemiological aspects of our investigations. We were from the start interested in the effects of such parameters as diet, occupation, climatic variation, and residence in rural or urban areas. It is to be hoped that these intriguing unknown quantities will be tackled by other investigators. For example, as I see it, there is need to duplicate in other parts of Africa the detailed appendix studies carried out on rural and urban Negroes in South Africa [8]. In all probability, such local studies will throw some light on the globally important subject of appendicitis [9-15].

Conclusion

Incidentally, this paper was a forerunner of my systematic studies on the appendix. These have included teenage appendicitis resolution of the appendix mass, acute appendicitis, index of community awareness, incidental appendectomy, worm endemicity in the appendix and, more recently, the hypothesis that global imaging will widen the epidemiology of appendicitis by studying the dilated crypts of this most interesting organ.

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