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Research Article

A comparative study of umbilical endometriosis

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Abstract

Ten biopsy cases of umbilical endometriosis were collected from patients of the Igbo ethnic group in Nigeria, West Africa. They were compared with 14 cases culled from the world literature, both series starting from the 1970s. Concerning the Igbo patients, (a) they were all nulliparous whereas the collated patients showed an average parity of 3, (b) they were aged roughly a decade less, (c) they manifested a temporal trend in keeping with the current impression that endometriosis in general is probably increasing in incidence, (d) they tended to present for treatment much later (5½ years) than the world pattern (1 year), and (e) they showed approximately the same dimension of lesions. One Igbo patient experienced the umbilical symptoms at menarche, thus, demonstrating that an intrinsic change in umbilical tissue may be an etiologic factor as contrasted with the transplantation or transportation theory. Another patient manifested selective involvement of the upper half of the umbilicus, thereby pointing to the need for research with some topographical emphasis. For instance, the distinctive staining reactions of lymphatics and blood vessels could be used with special reference to not only the uninvolved but also the involved portions of the umbilicus.

Keywords: Endometriosis, umbilicus, menarche, stains, epidemiology.

Introduction

In 1999, a research group [1] collaborating from Oxford (UK), Chapel Hill (USA) and Hudinge (Sweden) wrote as follows: " Endometriosis is defined as the presence of endometrial glands and stroma in sites outside the uterine cavity; the precise aetiology and pathophysiology of the disease remain poorly understood." In particular, as a recent review indicated [2], there are few if any epidemiologically well defined studies. Therefore, a collected series is deemed worthy of documentation from a West African community in order to compare it with the series culled from the world literature [3-10], both series commencing from the 1970s.

Investigation

During the 32-year period from February 1970 to March 2002, the senior author (WIBO) received surgical specimens from doctors working among the Nigerian Igbos or Ibos [11], a major ethnic group in this sprawling West African country. All sections of paraffin-embedded material were stained in the routine manner for diagnosis with haematoxylin and eosin. The records were analyzed for the present series of umbilical endometriosis.

Results

Table 1 displays the comparative findings in respect of 10 cases of umbilical endometriosis in chronological order of the dates of operation. The age varied from 21 years to 39 years, the average being 30 years. Each clinician sent an individual case. A menstrual link was usually identified and was experienced from menarche in Case 6. The duration of the illness before presentation varied from approximately 6 months to 13 years, the average being 5½ years.

The size of the lesion measured between 1.0 and 4.0 cm, averaging 2.6 cm. In case 8, the lesion was expressly stated to have occupied the upper half of the umbilicus. Table 2 shows data culled from the literature. There was nulliparity in every case.

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Serial No.	Name	Operation date	Age (yr)	Duration (yr)	Size (cm)
1	OE	29/8/74	21	½	1.5
2	UP	7/8/1982	27	3	4
3	AS	23/4/86	26	2	3
4	AN	3/12/1986	24	3	2.5
5	OB	12/9/1989	39	7	4
6	AG	18/3/92	27	13	3
7	EL	14/7/92	30	⅔	1
8	AC	23/5/95	30	1	2.5
9	EP	18/12/98	38	11	2
10	NS	8/3/2002	38	56	2.5

Table 1: Summary of Nigerian patients' data in chronological order

Serial No.	Country	Year	Age (yr)	Parity	Duration (yr)	Size (cm)
1	USA	1976	24	0	⅓	1.5
2	USA	1977	39	4	1	4
3	India	1978	40	2*	2	2
4	India	1979	42	3	1	0.8
5	India	1979	42	1	2	4
6	S. Africa	1981	46	10	2	4
7	Israel	1983	43	1	½	3
8	Israel	1983	25	0	½	2
9	Israel	1983	47	3	6-Jan	4
10	Israel	1983	32	3	3	3
11	Israel	1983	37	2	1½	3
12	Israel	1983	47	2	½	2
13	Mexico	1993	46	**	⅓	0.6
14	USA	2000	29	**	¼	0.8

Table 2: Summary of literature patients' data in chronological order * Inferred ** Not specified.

Discussion

It is striking that all 10 Igbo patients were nulliparous – from the youngest (21 years) to the oldest (39 years). That this must be meaningful is borne out by the fact that, in a previous report [12], it was shown that Igbo women of this age bracket tend to be highly parous. Thus, concerning the effect of genital tuberculosis on reproductive capability, whereas 20 American women aged between 17 and 38 years achieved only 3 pregnancies between them, 15 Igbo women aged between 20 and 40 years bore as many as 36 children. However, the occurrence of pregnancy in association with appendiceal endometriosis in an Igbo woman, who was reported elsewhere [13], reveals that infertility is not total in them. Incidentally, the literature series [3-8] manifested some 31 pregnancies among 12 patients, i.e., an average of almost para 3.

Another interesting finding was the relative youthfulness of Igbo patients. On the one hand, the documented ten were averagely aged 30 years. On the other hand, the culled 14 patients averaged 38.5 years.

Igbo patients tended to present late with their complaints: the average duration of their illness was 5½ years. On the contrary, the published pattern was as follows: USA, 6 months; Israel, 1 year; India, 1½ years; and South Africa, 2 years. Perhaps, societal development is the explanation.

Interestingly, the extent of the lesion did not vary in the community and World Series. Among the Igbos, the lesions varied from 1.0 cm to 4.0 cm (average 2.6 cm). Elsewhere, it varied from 0.6 cm to the same 4.0 cm and averaged 2.5 cm.

The patient may not volunteer menstrual information. Thus, concerning patient 6, her physician wrote: "This case was detected after the patient who was admitted for occasional abdominal pains decided to confide in me that she has pains and bled from the umbilicus during menstruation." Moreover, she had stated that this began with her menarche. As regards her case, she exemplified one of the theories held concerning pathogenesis, namely, that cases do not necessarily result from transportation of menstrual fluid but from intrinsic changes in umbilical tissue. Clearly, close questioning of patients may bring out such interesting details.

Detailed observations are helpful. For instances, on sending the specimen of case 8, her Doctor stated as follows: "Dark firm mass, irregular, easily bleeds, involving upper ½ of the umbilicus." This is intriguing because Scott's associates [14], on studying lymphatic transport to the umbilicus in monkeys, agreed with the following statement: "if umbilicus is the seat of a malignant growth, the inguinal or axillary glands may be secondarily involved according as the growth occupies the upper or lower part of the umbilicus." As we see it, if endometriosis has been a "continuing conundrum" in terms of pathogenesis [15], topographical studies may be illuminator. For instance, since lymph-borne and blood-borne routes have been questioned critically [16], it is well to utilize in the umbilicus the recent staining techniques [17] for distinguishing between the lymphatic's and the blood vessels.

In particular, can any involved and uninvolved portions be researched upon? Certainly, British workers [18] went to great lengths to quantify histologically the cyclical variations in endometriosis. Such detailed studies are likely to be profitable if pursued in respect of the possible role of lymph and blood in pathogenesis.

In another review article on endometriosis in general, Venter [19] commented that "it is still one of the unsolved diseases affecting women." Bargqvist's recent review[2] made the point that "there are few if any epidemiologically well defined studies." It is hoped, therefore, that the present study, which compares findings in a West African community with data culled from USA [3,4,10], India [5,6], South Africa [7], Israel [8], and Mexico [9], will go some way to ameliorate matters. Such similarities and dissimilarities are noteworthy epidemiologically.

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