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Prevalence of Gonadal Schistosomiasis in a Nigerian Community

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Abstract

This study aimed at the comparism of testicular and ovarian schistosomiasis among the Igbos, a major Ethnic Group living mostly in the South-Eastern Region of Nigeria. Personal records were kept from 1970 to 2000 in a Regional Pathology Reference Laboratory headed by the author. Now, both organs are anatomical homologues, the basic difference being that the one hangs freely outside the body while the other lies in the deep warmth of the pelvis. Therefore, does this difference affect the comparative incidences of important infective diseases? This question was answered with *Schistosoma haematobium*. Indeed, a difference was found. Thus, limitation of schistosomiasis to the testis was to the 0-19 age group while it was beyond 19 years in the ovarian infestations. It was inferred that the testicular cases were readily palpable, while the ovarian lesions were probably already formed but only became apparent following the surgical biopsy investigation undertaken in infertility cases. It is concluded that trans-abdominal ultrasonography may become useful in some infertility cases since positive results may promote therapy.

Keywords: *Testis; Ovary; Schistosomiasis; Age incidence; Ethnicity; Epidemiology*

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Introduction

The two homologous reproductive organs in the human body are the testis and the ovary. One obvious difference between them is the development of the former outside the body. Now, both of them are prone to be attacked by parasites especially by Schistosoma haematobium concerning which recent data are available [1]. Therefore, comparative studies of both organs are undertaken because they may repay dividends epidemiologically. Incidentally, a preliminary study of this lesion in the community showed but a single testicular example [2], while there was also one ovarian case in which a thecoma was selectively involved [3].

Materials and Methods

During the 40-year-period from 1970 to 2000, I manned a largely free Regional Pathology Laboratory situated at Enugu, a Regional Capital. It served the Ibos or Igbos [4], one of the largest ethnic groups in the Country. This study emulated the principles of Macartney, Rollaston and Codling [5], who illustrated that a histopathology data pool is useful for epidemiological analysis. Therefore, such analysis was undertaken with materials from my histopathology data pool as regards schistosomiasis involving the ovaries and testes in this developing community.

Results

Table 1 shows the age trends remarkably. All testicular cases were swellings suffered before 20 years of age, whereas from 20 years onwards those of the ovary came to light mostly because of laparoscopic investigation of sterility. Thirteen doctors submitted individual cases while two sent 2 cases each. Of the hospitals involved, the Missionary Hospital at Afikpo in the hinterlands stood out with 6 cases. Quite behind was the larger cosmopolitan University Teaching Hospital at Enugu with only 3 cases.

Discussion

Tiboldi [6] paid particular attention to the involvement of human and primate ovaries in schistosomiasis. On his part, Davis [1] was persuasive in respect of recent advances in schistosomiasis as follows: "Of the parasitic diseases, schistosomiasis, second only to malaria in global importance, is essentially an infection of rural and agricultural areas in tropical countries where there exists poverty, ignorance, poor housing, bad hygienic practices and few, if any, sanitary facilities." Accordingly, this brief paper ratifies this apt assessment by the prominence of hinterland Missionary Hospitals. Surely, this points to the area for concentrating eradicative measures.

Apparently, gonadal schistosomiasis is a mild disease in this community. This contrasts strongly with the recent report of testicular schistosomiasis in association with fatality [7]. It is in respect of the urinary bladder that the local patients are facing infection problems among children [8], while the adults battle with malignancy [9]. Two Nigerian publications from the Northern Region [10] and the South-Western Region [11] attested to local academic interest in S. haematobium. The latter showed concern thus: "a plea is made for the expansion of multinational control programs in sub-Sahara Africa." My own study shows that there is a hyper endemic area on which to concentrate such programs. The other Nigerian publication added the role of trans abdominal ultrasonography in the investigations being carried out in the communities. Perhaps, the ovary should be searched especially in infertile patients. Thereafter, therapy may even become more successful.

Age (yr)	Testis	Ovary
0 – 9	5	-
10 – 19	4	-
20 – 29	-	5
30 – 39	-	1
40 – 49	-	2
50 +	-	1
Totals	9	9

Table 1: *Age/sex distribution of gonadal schistosomiasis.*

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