

BILHARZIA OF THE FEMALE GENITAL TRACT

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It would appear from a study of the literature that bilharzia of the female genital tract is an uncommon condition. This prompted us to present our experience of a considerable number of cases, and to elaborate upon our findings, since these differ in many respects from those of other authors.

Incidence and Distribution

Between the years 1957 and 1962, 138 cases of bilharzia of the female genital tract were diagnosed at King Edward VIII Hospital, Durban. The cervix was found to be the site most commonly affected (Table I), whereas the fallo-

TABLE I. INCIDENCE OF BILHARZIA IN THE FEMALE GENITAL TRACT

	Cervix	Tube	Vulva	Vagina	Ovary	Endometrium
1957	12	3	0	1	0	0
1958	6	3	2	2	0	0
1959	22	0	2	3	0	0
1960	21	1	0	0	2	0
1961	20	4	3	1	1	0
1962	21	4	3	1	0	0
Total	102	15	10	8	3	0

pian tube, regarded by Charlewood *et al.*⁴ as most vulnerable, was less often involved. If Badawy's statement³ is true—that *Schistosoma mansoni* tends to affect mainly the tube and ovaries, whereas haematobium involves usually the vulva, vagina and cervix—it is quite apparent that the site involved will depend upon the particular parasite most prevalent in that area. On the other hand, due regard should be given to the fact that the distribution will bear a close relationship to the frequency with which a particular site is investigated, and it is customary for the cervix to be examined far more often than the tube.

Endometrial bilharziasis was recorded in two patients, but on examination of the slides concerned, bilharzia ova can be seen in the 'endocervix' and not in the endometrium (Fig. 1). Thus, although isolated cases of endometrial

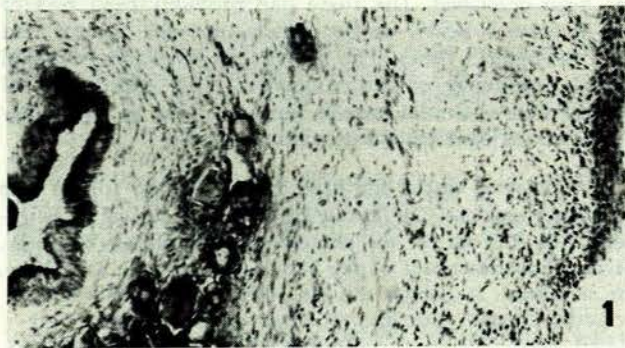


Fig. 1. Bilharzia of the cervix.

bilharzias are recorded in the literature by Charlewood *et al.*,⁴ Te Groen,⁵ and others, we submit that the condition may be even rarer than has previously been suggested; for

in many cases the ova may be in the endocervix rather than the endometrium. The reason for the relative immunity of the endometrium is unknown. It may be that the vasculature of this area is such that the female worm cannot get to the endometrial surface. It has also been suggested that the ova may be shed with the endometrium each month, but this cannot be true, for in the first place many curettages are performed pre-menstrually without ova being found in these specimens, and secondly the whole endometrium is not shed each month so that some residual infestation should remain.

It is of passing interest to note that the distribution of cancer in the African genital tract is similar to that of bilharzia, with the cervix being commonly affected, but the endometrium only rarely involved.

BILHARZIA OF THE CERVIX

Out of 102 cases of bilharzia of the cervix the records were sufficiently complete to justify analysis in only 65.

Age. Bilharzia was diagnosed from the age of 15 to 60 years—23 of the patients being under 42 and over 25 years of age. It appears that no age group is exempt, although Badawy³ is of the opinion that the cervix is affected in an older age group than the vulva, but this may well be because a biopsy on the cervix is performed more often in older than in younger people.

Race. Out of the 65 cases, 51 occurred in Africans and 14 in Indian patients. This ratio is in accord with the normal rate of admission of the two racial groups to our hospital.

Parity. 12 out of the 65 patients had not been pregnant and a total of 14 could be regarded as suffering from infertility, but when one considers that there was often associated fibromyomata, salpingitis and other pelvic pathology present in these patients, our findings cannot lend support to the claims of Charlewood *et al.*⁴ and Yousseff and Abdine,⁹ that bilharzia is a primary cause of infertility.

Only 5 out of 65 patients had had one or more abortions and we feel that the risk of abortion is not increased, although Yousseff and Abdine⁹ disagree on this point and maintain that abortion, premature labour and intra-uterine death are increased by genital bilharziasis.

Symptoms. As can be seen from Table II, most patients were diagnosed incidentally in the course of some other pelvic disease with all its attendant symptoms, but in 24

TABLE II. SYMPTOMS

Intermenstrual Bleeding	.....	.....	.....	12
Amenorrhoea	.....	.....	.....	8
Menorrhagia	.....	.....	.....	2
Polymenorrhoea	.....	.....	.....	2
Incidental Finding	.....	.....	.....	41

cases no pathology other than bilharzia could be detected. The commonest complaint was intermenstrual and contact bleeding—symptoms similar to those noted in carcinoma of the cervix.

Eight patients suffered from amenorrhoea, followed in a quarter of them by subsequent menorrhagia, and it must be assumed that this is a manifestation of some toxic process, although it should be mentioned at this stage that no case of uncomplicated bilharziasis demonstrated any anaemia and leucocytosis was uncommon. Persistent amenorrhoea was described by Gilbert,⁷ Afifi,¹ and Areal,² but Charlewood *et al.*⁴ suggested that menorrhagia is liable to follow a short period of amenorrhoea. We have seen both types of pictures in our series.

Lower abdominal pain was a common complaint in our patients, but on careful analysis one could always find a definite cause for it, other than bilharzia. Here again Charlewood *et al.*,⁴ Areal² and Gelfand⁶ are of the opinion that pelvic pain is a feature of genital bilharziasis in contradistinction to our findings.

Physical signs. The clinical appearances of bilharzia of the cervix as shown in Table III differ in several respects from the description given by Charlewood *et al.*⁴ and

Erosion	.....	.....	.....	.....	.....	32
Granuloma	.....	.....	.....	.....	.....	8
Ulcer	.....	.....	.....	.....	.....	3
Hard Nodule	.....	.....	.....	.....	.....	2
Endocervical Polyp	.....	.....	.....	.....	.....	1
Normal	.....	.....	.....	.....	.....	5
Not stated	.....	.....	.....	.....	.....	5
Carcinoma	.....	.....	.....	.....	.....	9
						—
						Total 65

Badawy.³ True, a large number of erosions were found, but it is not justifiable to conclude that the presence of bilharzia ova was the aetiological factor. Indeed, it is our opinion that if biopsies were taken of many 'normal cervixes', they would reveal bilharzia ova!

Granulomata and polypi were less commonly found, but ulceration was seen more often than one would expect from the reports of other observers.

Diagnosis. Bilharzia was diagnosed by the various methods shown in Table IV, and it is quite apparent that no single method of diagnosis, other than biopsy, is

Method	No.	% Correct
Biopsy cervix	65	100
Rectal biopsy	7	71
24-hour urine	5	60
Cystoscopy	14	43
Cytology	11	27

completely reliable. Rectal biopsy, however, is less fallible than the other methods of establishing the diagnosis and this suggests that bilharzia is a generalized pelvic disease affecting the bladder, rectum and genital tract in many cases.

The diagnosis was made on cytological examination in only about one-quarter of the slides examined from cases of established bilharzia. Cellular atypia was present in all 11 of our cases, a finding that is in keeping with Youssef *et al.*'s description.¹⁰ In Fig. 2 a bilharzial ovum and many atypical cells are shown. The danger of confusing the appearance with that of malignancy, as described by Crichton and Birch,⁵ must be emphasized.

Pre-malignancy. Whereas it has been suggested that bilharzia of the cervix is pre-cancerous, we are in agreement

with Crichton and Birch,⁵ who suggest that this is unlikely. Firstly, in the 65 cases presented in this series, only 9 cases of carcinoma were found, even though cancer forms

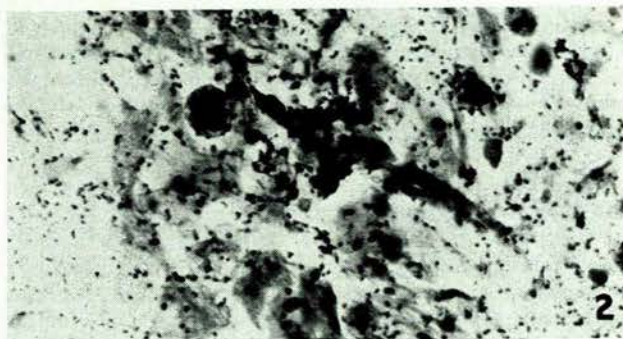


Fig. 2. Vaginal cytology showing a bilharzia ovum and many atypical cells.

a high percentage of the specimens received and secondly, on examining 1,200 slides of simple cervicitis, 43 cases of bilharzia were detected, whereas in 1,200 slides of carcinoma of the cervix there were only 28 cases of bilharzia—an incidence of 3.6 and 2.3% respectively.

Treatment. The treatment of bilharzia of the cervix is primarily by means of antimony tartrate and other drug therapy, but it is our experience that once a granulomatous lesion has developed, surgical excision is usually indicated. It is probable that the excessive fibrosis prevents the drug from reaching the affected area.

BILHARZIA OF THE FALLOPIAN TUBE AND OVARY

Pre-operative diagnosis of bilharzia of the tube and ovary were not made, and the condition was diagnosed only at the time of hysterectomy performed for other conditions. The typical macroscopic appearance at the time of operation is one of uni- or bilateral chronic inflammatory disease with adhesions, fibrosis and hydrosalpinges. The distinct possibility does exist that the presence of bilharzia ova in such tubes may have been coincidental.

BILHARZIA OF THE VULVA AND VAGINA

All our patients with bilharzia of the vulva and vagina presented with warty growths, indistinguishable from condylomata acuminata—often reaching considerable size (Fig. 3). In many instances this lesion is very amenable to surgical



Fig. 3. Bilharzia of the vulva.

excision. In one of our patients the bilharzia was associated with carcinoma of the vulva, and the possibility that bilharzia may predispose to malignancy of the vulva does exist.

SUMMARY

The high incidence of bilharzia of the female genital tract in the Natal African and Indian patient is revealed. The majority of cases affected the cervix and not the fallopian tube, a finding which differs from the experience of others. Endometrial bilharziasis is an extremely rare entity. In cervical bilharziasis no age or racial difference was noted and the risk of infertility and abortions did not appear to be increased. Although amenorrhoea and menstrual irregularity were noted in a few, the diagnosis was made incidentally in most cases. The appearance of the lesion was usually that of simple erosion, although ulceration and polypi were noted. The danger of confusing the cytological picture with that of carcinoma is a very definite hazard, but it is our opinion that bilharziasis of the cervix is not

a pre-malignant condition. A short description of bilharziasis of the fallopian tube, ovary, vulva and vagina is given.

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