

AMOEBIASIS OF THE LOWER GENITAL TRACT

by

M. R. NARVEKAR*, M.D.

and

LAXMI ASHAR**, M.D., F.C.P.S., D.G.O., D.F.P.

Introduction

The female genital tract would appear to be very infrequently affected by the commonly prevailing tropical protozoan infection, amoebiasis. Although amoebiasis of the other organs is so rampant, relatively few cases with amoebiasis of the female genital tract have been reported. The majority of the reports on this subject are from India. Sen (1949), Balasubramanyan and Cheriyan (1949), Bhowmik (1951), Mishra (1950 and 1953), Sinha (1961), Talwalkar and Israel (1962), Kalyanikutty and Verghese (1964), Shrinivas Rao and Prosunamba (1967) have reported cases from India. Similar cases have been reported in the literature by Lee (1932) from China, Moghraby (1960) from Suban, Rose (1937, 1946) from China, Bacigalupo *et al* (1942) from Argentina, May (1943), Bickers (1943), Cleland (1944), De Rivas (1944), Morse and Seaton (1943), Weinstein and Weed (1948) from New Orleans and Helibrum from

West Borneo and Isaza Majid from Mexico.

Case Report

Mrs. S. J., aged 40 years, was admitted on 2nd November 1968 at K.E.M. Hospital, Bombay, with a history of irregular menstrual periods of 2 years' duration and leucorrhoea for one and a half months. She also complained of occasional pruritus of the vulva.

Her past menstrual history did not reveal any abnormality. During the last 2 years, the patient had menstruated at the interval of 1½ to 2½ months and there was profuse blood loss for 5 to 6 days. Her last menstrual period had started 20 days previously.

The patient had three full term normal deliveries, the last confinement being 18 years ago. There was a history of frequency of stools with blood and mucous 7 months ago, lasting for one month. She was treated elsewhere symptomatically for it.

On examination, she was a fairly built woman, but was rather pale. Her vital signs were within normal limits. Abdominal examination revealed nothing abnormal. Liver and spleen were not palpable.

On speculum examination, the cervix appeared to be markedly unhealthy. It was bluish in colour, vascular and friable and bled on rubbing with the edge of the speculum. There was vaginitis with yellowish mucopurulent discharge. There was a second degree perineal tear. A small ulcer, about ¼" in diameter with serpiginous margin was detected at the anterior end of left labium minus near the clitoris. There was marked erythema of the surrounding area. The ulcer was tender and

*Honorary Associate Prof. of Obst. and Gynec.

**Registrar.

Dept. of Obst. and Gynec., K. E. M. Hospital, Parel, Bombay 12.

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there was a slough at the base. It was not indurated. The edges were not raised.

On two occasions, biopsy of the vulval lesion was taken. In the interval between the two biopsies, the ulcer appeared to have spread and completely involved the clitoris. The sections did not reveal any abnormality except 'chronic inflammation'. The cervical biopsy also showed changes of 'chronic inflammation'. Neither of the sections showed any changes of malignancy, nor of specific granuloma.

The following investigations were carried out:

Haemoglobin 10 gms. per cent. Urine examination did not reveal any abnormality. Blood sugar (fasting) 92 mg. per cent, (post-prandial) 115 mg. per cent. Blood urea—12.5 mg. per cent. Kahn test, negative. Blood group—B; Rh negative. E.C.G.—N.A.D.

As the ulcer failed to heal in spite of oral and vaginal Mycostatin tablets, a course of 10 P.A.M. injections and chloromycetin with cortisone in successive courses, a simple anterior vulvectomy was carried out on 24th December 1968.

Sections of the vulva showed changes of chronic inflammation with necrosis. At one place, groups of cells, resembling cystic forms of *Entamoeba histolytica* were seen. A reappraisal of the old vulval biopsy slide did not reveal any amoebic infection.

In view of the unsuspected histological finding, stool examination was repeated but no vegetative or cystic forms of *Entamoeba histolytica* were seen. Proctoscopy did not reveal any abnormality.

The patient was put on Flagyl (400 mg.) three times a day for 10 days. A week after the end of this treatment, the cervical appearance had changed markedly for the better and the mucopurulent discharge had cleared up completely. The menstrual period immediately following the treatment with Flagyl was conspicuous by the absence of any excessive bleeding and lasted only for 4 days.

On 24th January 1969, a vaginal hysterectomy was carried out under spinal anaesthesia. A decision to perform hysterectomy was taken as the patient had come to Bombay from her native village only for the treatment of menorrhagia. She

had no facilities to stay in Bombay under observation and as far as she was concerned, the menorrhagia was of more serious concern to her than the discharge. She did not want to run the risk of recurrence of bleeding after her return to her native village.

There were no post-operative complications. The vulvectomy and hysterectomy incisions healed completely by the time she was discharged from the hospital 12 days after the hysterectomy.

Discussion

Amoebic infection, so commonly seen in the tropics and subtropics, manifests itself usually in the form of colitis or hepatitis. Shrinivas Rao and Prasunamba (1967) gave its incidence as 3-5 per cent on routine stool examination of all patients admitted to their hospital. Mouth, nose, bronchi, lungs, kidneys, urinary bladder, ovaries, perineal scar and perianal region are also well known to be affected by this organism.

History

The recognition of *Entamoeba nana* in the vaginal washings obtained in Rhesus monkeys dates back to 1928 and was reported by Heguer. Thereafter, many workers have reported the presence of this entity in the human beings. The majority of the reports are on amoebiasis of the vagina and the cervix. In this group, the cases which require special mention are amoebic vaginitis in an unmarried girl with intact hymen, as reported by May (1943), and amoebiasis superimposed on carcinoma of the cervix as reported by Lee (1932). Brag and Teoh (1964) reported amoebiasis superimposed on carcinoma cervix with recto-vaginal fistula. Bickers (1943), in his series

of 200 cases of leucorrhoea, found that *Entamoeba histolytica* was responsible for the complaint in 0.5 per cent.

A case of amoebiasis of the uterus has been published by DeRivas (1944). So far as amoebiasis of the vulva is concerned, Cleland (1944) reported the superimposition of this infection on a condylomatous growth of the vulva. The case published by Sen (1949) also showed the presence of the ulceration of labia majora and fourchette in association with amoebic vaginitis. These disapproved with specific treatment. However, he has not described in details the characteristics of these ulcers or specified this as a case of amoebiasis of the vulva. A photograph of amoebiasis of the skin of the vulva in a child is published in Pathology by Anderson, by courtesy of Dr. Francisco. The details of this case, however, have not been reported.

Besides these instances, no other case of amoebiasis of the vulva could be traced in the English literature. Although amoebiasis of the female genital tract has been described by Masani, Chatterjee and Manson Bahr in their standard text books, no mention of amoebiasis of vulva has been made.

According to Bhowmik (1951) only 20 cases of amoebic infection of the female genital tract have been reported upto 1951. The cervix was involved in 70 per cent of these cases and in 18 cases there were lesions in the vagina. Shrinivas Rao and Prosunamba (1967) were able to collect 24 cases of amoebiasis of the female genital tract from the literature.

Mode of Infection

Various explanations as to the mode of infection of the female genital tract by *Entamoeba histolytica* have been given by various workers. The proximity of the lower bowel, which undoubtedly acts as a reservoir of infection, affords a simple explanation, but it is the mechanism by which the female genital tract is apparently protected from more frequent involvement that needs study.

It has also been suggested that as there is communication between the perirectal and perivaginal plexus of veins, venous embolism may be a possible aetiological factor, since this undoubtedly is the mode of spread to the liver. The infection of the lower part of the female genital tract could also occur as a result of perineal tears, rectovaginal fistula or cleansing of the perineum from behind forwards, a common practice in India. This possible mechanism of spread has been postulated by Anmola Das and others. Bad hygiene may be responsible for the cases reported in children.

Another possible factor responsible for this infection could be coitus if there is amoebic ulceration of the penis. A case of amoebiasis of the penis has been reported by Sayed and Amin (1962), as well as by Talwalkar and Israel (1962).

In spite of these various factors which are considered to be responsible for infection, it is surprising that amoebiasis of the vagina and other parts of the female genital tract is so rare. The following could be the explanation.

The normal acidity of the vagina destroys this protozoon. It is only the devitalized vaginal mucosa, be it as

a result of old age, trauma, fistula, or increase in the pH of the vaginal secretion which can be prone to this infection.

Yet another possibility is the absence of folds or crevices in the mucosa as well as the stratified squamous epithelium of the vagina, anatomical differences between the vagina and the intestines which protect the former from this infection.

The third possibility is that the majority of patients with genital amoebiasis have at some stage suffered from amoebic dysentery for which they were treated. The genital lesions would thus disappear without leaving any clue as to their existence.

The unawareness of this condition and failure to examine the discharge for the presence of this protozoon may lead to a missed diagnosis. There is also the possibility of a subclinical asymptomatic stage of the infection.

Symptoms

In the majority of reported cases the presenting symptom was the profuse vaginal discharge which was blood-stained and often mucopurulent. The onset is often acute and there is no pruritus. Some of the patients reported recurrent attacks of diarrhoea, though what is more striking is the fact that many of them did not complain about it even on interrogation.

Some of the patients complained of burning and frequency of micturition. Sen (1949) reports such a case where a catheter specimen revealed amoebae. Vague hypogastric pain was also one of the symptoms commonly mentioned, but it is difficult to establish the cause and effect re-

lationship. Similarly, in our case reported above, the menorrhagia abruptly disappeared after specific treatment for amoebiasis, but that again is not sufficient evidence to draw any conclusions.

In the early stage, amoebiasis of the vagina is characterised by rawness of the vagina and blood-stained discharge. This is followed by minute ulceration and then by typical ulceration of the vagina. There may be multiple ulcers with undermined edges or overhanging margins and mucopurulent discharge.

The cervix, if affected, appears hypertrophied, very unhealthy, almost spongy on the surface, bleeding on rubbing with a speculum and exuding a blood-stained mucopurulent discharge.

It is interesting to note that more than one report describes the uterus as 'enlarged and soft' [Morse and Seaton (1943), DeRivas (1944)].

The ulcers on the vulva and perianal regions seem to have a typical appearance. They are shallow with serpiginous margins, slightly undermined edges, soft, with slough at the base, tender on palpation and nonvascular.

The diagnosis of amoebic infection of the vulva, as also the rest of the female genital tract in general, seems to depend on a clinician who has the possibility constantly in mind, working with an alert histologist. It is all too easy to pass off such a lesion as a non-specific chronic inflammation and indeed a particular section may show no evidence of the disease. An examination of a wet preparation of the discharge from anywhere in the lower genital tract, the scrapings from a suspicious lesion as well as the

washings from the uterine cavity may show up the tell-tale motile amoebae. Histological examination of the biopsy specimens from the vulva, vagina and cervix may show the amoebae in the submucosa.

The differential diagnosis lies between other granulomas, like syphilis, tuberculosis, chancre, granuloma inguinale and even malignancy.

It is well worth remembering that simultaneous examination of the stools may or may not yield evidence of amoebic infection. Presence of the same is hardly evidence in favour in view of the almost universal distribution of the infection, especially in the tropics.

With the availability of metronidazol and emetine there need hardly be a discussion on the treatment. Any form of local therapy seems entirely unnecessary.

In view of the above discussion certain points pertaining to this case need comment. We never made any attempt to diagnose whether the cervical and vaginal lesions were of amoebic origin and though the condition cleared up remarkably and promptly with the institution of metronidazol, no direct evidence was obtained. Same comments apply to the disappearance of menorrhagia, though the suggestion is interesting.

Summary

A case of amoebiasis of the lower genital tract has been presented and discussed.

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References

1. Bacigalupo and associates: as quoted by 23.
2. Balasubramanyan and Cheriyan: *Ind. Med. Gaz.* 84: 501, 1949.
3. Bhowmik, A.: *Ind. Med. Gaz.* 86: 354, 1951.
4. Bickers: As quoted by 23.
5. Brag, C. A. and Teoh, T. B.: *J. Obst. & Gynec. Brit. Emp.* 71: 299, 1964.
6. Chatterjee, K. D.: 'Parasitology' 6, Amrita Bannerjee Rd. Kalighat, Calcutta, India.
7. Cleland, J.: *Brit. J. Trop. Med.* 47: 54, 1944.
8. DeRivas, D.: *Am. J. Trop. Med.* 24: 185, 1944.
9. Heguer: As quoted by 23.
10. Helibrum, A.: As quoted by Charles Bowesman: *Surgery and Clinical Pathology in Tropics*, Edinburgh and London, 1968, E. & S. Livingstone Ltd.
11. Isaza Majid: As quoted by 23.
12. Lee: As quoted by 23.
13. Kalyanikutty, P. and Varghese, E. K.: *J. Obst. & Gynec. India.* 14: 924, 1964.
14. Manson Bahr: *Manson's Tropical Diseases*, The English Languages Book Society, Billiere, Tindall and Cassell, Ltd.
15. Masani, K. M.: *Text Book of Gynaecology*, Bombay, Popular Publication.
16. May, M. V.: *Ind. Med. Gaz.* 78: 250, 1943.
17. Mishra, S.: *J. Obst. & Gynec. India.* 3: 306, 1953.
18. Moghraby, A. S.: *J. Obst. & Gynec. Brit. Emp.* 67: 332, 1960.

19. Morse, E. M. and Seaton, S. P.: *Am. J. Trop. Med.* 23: 325, 1943.
20. Rose, J. R.: *Lancet.* 1: 520, 1946.
21. Sayed, B. A. and Amin, S. P.: *Brit. Med. J.* 1: 157, 1962.
22. Sen, N. C.: *Brit. Med. J.* 1: 808, 1949.
23. Sinha, Anmola: *J. Obst. & Gynec. India.* 11: 323, 1961.
24. Shrinivas Rao, K. and Prosunaba, K.: *J. Obst. & Gynec. India.* 17: 338, 1967.
25. Talvalkar, G. V. and Israel, Sarah: *J. Obst. & Gynec. India.* 12: 729, 1962.
26. Weinstein, B. Bernard and Weed, John C.: *Am. J. Obst. & Gynec.* 56: 83, 1948.