

"A CASE OF AMOEBIC ULCER OF VAGINA"

by

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Amoebiasis in general is a problem disease of our country but amoebiasis of genital tract is rather rare. The cause of rarity of the infection of genital tract by *Entamoeba histolytica* is not fully understood. This case of amoebic ulcer of vagina is interesting because of the fact that it was diagnosed very late by method of trial and error.

The patient would have been cured earlier if one had suspected the presence of such a malady in the female genital tract.

Case Report

R. R. D., aged 44 years, female ward attendant, T. B. Centre, was referred to Cancer Clinic as a case of carcinoma vagina from our Gynaecological Outpatients' Department in February, 1958. Patient was admitted from Cancer Clinic for investigation, as diagnosis of carcinoma vagina was doubtful on clinical examination. She had following complaints at the time of admission.

- i. Foul smelling discharge 3-4 months.
- ii. Weakness. iii. Backache.

Menstrual history — Cycle — $\frac{5-8}{30}$, flow normal.

She was having this foul smelling discharge in between menstrual periods and also with menstrual flow.

Obstetrical History. Three children, all full-term, normal deliveries. Puerperium afebrile. Last child 18 years old.

During the 3rd pregnancy she had

urinary trouble and fever in the 6th month, for which she was hospitalized, treated and cured. It was perhaps B-coli infection.

Past History. She had once joint pain and fever for which she was hospitalized and treated many years ago.

No history of dysentery as far as she could remember.

Family History: Husband died of asthma 2 years ago; 3 sons all alive and healthy.

Personal History. Nothing of importance.

Gastro-intestinal Tract. Appetite fair. Bowel movement once daily. Occasional constipation.

On examination. Height—5' 2"; Weight—92 lbs; No pallor or oedema.

Systemic Examination. No abnormality except some pain in the movement of right knee.

Pelvic Examination. Uterus anteverted normal size, mobile. Adnexa not palpable.

Specular Examination. There were several small ulcers situated transversely on the posterior vaginal wall. Lower lip of cervix was congested.

Ulcers were superficial, shallow, with irregular overhanging margin, and floor covered with greyish slough. Ulcers bled on touch and necrosed tissue came out on gentle scraping giving the false impression of friability. Discharge from ulcers was foul smelling (resembling so-called cancerous smell).

After admission, following investigations were carried out.

1. Blood—routine normal—E. S. R., 31.25 mm./hr.
2. Gram's staining of vaginal smear — pus cells and staphylococci.
3. Stool and urine, N.A.D.
4. High vaginal swab culture—haemo-

phillus bacillus and staphylococci.

5. X'ray chest—N.A.D.

22-3-58. 6. Vaginal biopsy—Chr. inflammation with fibrosis C/326.

7. Endometrial biopsy — endometrium in oestrin phase C/327.

After being satisfied that she was not suffering from either primary carcinoma of vagina or tuberculosis of vagina, the patient was discharged and advised to use mycostatin vaginal capsules. Patient was very much relieved to know that she was not suffering from either of the dreadful diseases suspected at the time of admission and she went home happily with the tablets.

But to our surprise she again visited the out-patients' department for the persistence of her complaints. She was again admitted on 5-6-58 for further investigations.

On Examination. Pelvic findings were same as before.

The following investigations were carried out. Blood W. R.—Negative. Vaginal smear was examined in normal saline. Vegetative *Entamoeba histolytica* and cysts were found.

This examination was again repeated on 29-6-58 and 31-6-58 and the presence of vegetative amoeba in smear was confirmed by our Professor of Gynaecology, Professor of Pathology, Dr. N. L. Modi and others in the Department of Pathology.

31-6-58. Microphotograph of the slides showing vegetative amoeba were taken (Figs. 1 and 2).

Besides amoebae there were pus cells and blood cells in the smear. Amoeba was of rather larger size than seen in stool examination. But it showed typical active movements by showing pseudopodia and

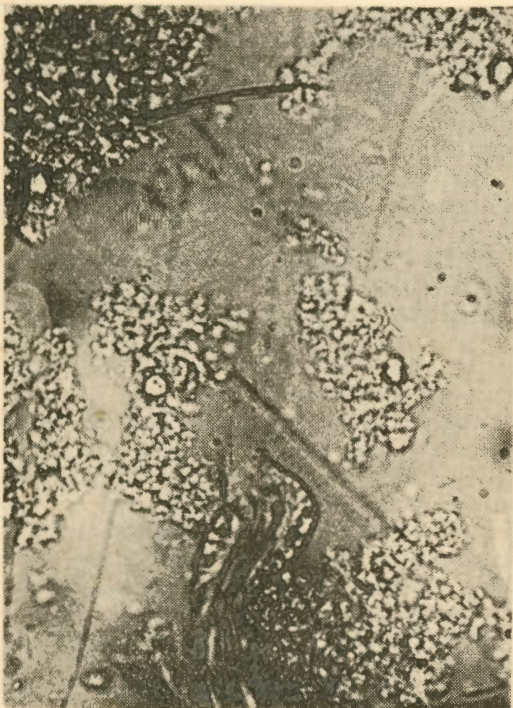


Fig. 1

Photomicrograph showing active vegetative amoebae showing pseudopodia besides pus cells and epithelial cells.



Fig. 2

Photomicrograph showing active vegetative amoebae showing pseudopodia besides pus cells and epithelial cells.

there were ingested R. B. C.

After seeing amoebae in vaginal smear, stool examination was repeated. At first nothing could be found. Then stool was examined after a saline purge. Report of stool this time E. H. Cysts and pus cells.

28-6-58. Sigmoidoscopy by Dr. R. N. Tiwari, M. S., F.R.C.S. No lesion visualised within 10 inches of intestinal tract.

After the above investigations diagnosis of amoebic ulcer of vagina was confirmed and treatment started on 1-7-58.

1-7-58. She was given emetine hydrochloride, grain one, intramuscularly daily along with B. complex parenteral and oral. She was also getting Desulan vaginal tablets for local treatment as there was mixed bacterial infection besides amoeba. Yatren vaginal douche, mentioned in literature, was not given in this case.

8-7-58. After one week specular examination was repeated. Foul smelling discharge had completely disappeared and ulcers were healing.

10-7-58. Ulcers had completely healed up, leaving behind black pigmented scar at the site of ulcer.

12-7-58. This was confirmed by Prof. John.

In total, she had 9 grains of emetine hydrochloride. 1 vial of B. Complex and 12 tablets of Desulan. Follow up examination on 22-7-58, 29-7-58, 5-8-58, and on various occasions in 1959 showed a recurrence. Her last follow-up examination on 31-9-59 showed no evidence of recurrence. Stool and urine examination showed no abnormality either. However, she often visits us for pain in the knee which is perhaps due to osteoarthritis.

Discussion.

Before discussing certain problems of infection of genital tract by *E. Hystolytica* a brief review of literature is presented.

Hegner (1928) for the first time reported presence of *E. Nana* in vaginal washings obtained by *Hurtman* in the course of some experiments on Rhesus monkey. Before this there was no mention about presence

of this protozoa in genital tract either in monkey or in human being.

Lee (1932) reported two cases with amoebic infection of cervix superimposed on carcinoma cervix.

Rose from China has reported cases of amoebic vaginitis in 1937 and 1941.

Bacigalupo and associates from Argentina, in 1942, reviewed literature and described one case.

May (1943) reported one case of amoebic vaginitis in an unmarried girl with intact hymen.

Bickers (1943) studying two hundred cases of leucorrhoea observed that about 0.5% cases were caused by *E. Hystolytica* but did not report any case.

H. S. U. (Cleland 1944) reported two cases of amoebic ulcers superimposed on condylomatous growth of vulva and carcinoma cervix.

De Ravis (1944) reported a case of amoebic infection of the vulva. In this case the *E. Hystolytica* were detected in the tissues at autopsy.

Morse and Seaton in 1944, Cleland, Garin (1917), Sen 1949, have also reported such cases. *B. Bernard Weinstein* and *John C. Weed* from New Orleans have reported four cases of amoebic vaginitis and have also given a brief review of this condition.

Heilbrun 'A' from West Borneo and *Isaza Majid* from Mexico reported such cases. *Balsubrahmanyam M.* and *Cheriyian O.* from India also reported a case of amoebic vaginitis. *Bhoumik A.* in 1951 reviewed the literature and also reported a case of amoebic ulceration of the cervix and vagina.

Mishra has reported two such cases of amoebic vaginitis in 1950 and two cases of infection of cervix and vagina

in 1953. R. D. Pandit (1956) from Bombay has reviewed the literature and reported cases of amoebic vaginitis and cervicitis.

Chatterjee and Manson-Barr have also mentioned, in their standard text books, references about occurrence of infection of female genital tract by *E. Hystolytica*. I have not come across so far any reference of this condition in standard text books of Gynaecology and Pathology. Recently, Masani has made some reference to this condition in his Text Book of Gynaecology.

From review of literature and from our own experience it is rather surprising that infection of female genital tract by *E. Hystolytica* is so rare in a country like ours where amoebiosis of intestinal tract is so common.

If other parts of the body, like liver, lungs, bronchi, mouth, nose, kidney, bladder, ovarian abscess, perianal region and perineal scar, can be affected by *E. Hystolytica* there is no reason why female genital tract should not be also equally affected, if not more, as it is in close proximity to the intestinal tract.

The above organs are affected by various emboli or by process of continuity and contiguity.

While presenting this case and hunting literature certain queries have drawn my attention and interest about the mode of infection of genital tract by *E. Hystolytica*. Secondly, the problem of rarity of infection of genital tract, though in close proximity to the rectosigmoid, perhaps the commonest site of intestinal amoebiosis.

From literature it appears that active vegetative form of *E. Hystoly-*

tica gets an easy access into the genital tract during act of personal cleaning practised in our parts of the country. The access of amoebae is favoured by presence of lax perineum, perineal tears, presence of rectovaginal fistulae and improper cleansing habits. After access these active vegetative forms can survive only when vaginal acidity is lowered.

In my opinion besides above mode of infection, the infection of genital tract, especially vagina, can be produced by continuity and contiguity of tissues from rectosigmoid lesions. This is proved by the fact that active vegetative form burrows deep in the wall of ulcers and goes on penetrating by process of colliquative necrosis caused by liberation of proteolytic ferments. The other possible mechanism is perhaps through venous emboli (as in case of liver abscess). This view is supported by the anatomical fact that there is intercommunication between para-rectal and para-vaginal veins and anastomosis of portal and systemic circulation between superior, middle, rectal and inferior rectal veins. This is the possible mechanism for explaining cases of vaginal ulcers in the absence of infection of rectosigmoid region. In my opinion both active vegetative forms and cysts, which are the infecting forms of parasite, can also get access and set up their reaction (as shown in our slide).

These are just suggestions and they have to be confirmed by further investigations.

The second problem of rarity of this type of lesion in genital tract has been explained, by various authors enumerated before, as due to the failure to recognise this condition.

They suggest that if all cases of leucorrhoea are thoroughly investigated for *E. Hystolytica* as a routine, this type of infection will not be as rare as it appears. The other reason for rarity has been given that many cases of early infection are cured before detection while treating amoebic dysentery with amoebicidal drugs. In my opinion also, this type of infection of genital tract is not so rare. The cause of rarity is failure to investigate all cases of leucorrhoea, and the other factor, that most of these patients get treatment for dysentery off and on. But these are not the only reasons for rarity of this infection in the genital tract. One has to consider certain features which are present in the colon and absent in the genital tract. The first is the lining columnar, single layer, epithelium, in the colon, which is thrown into folds (villae). There are glands (glands of Leiberkuhn) in the colon. While vaginal mucosa is squamous and many layered, there are no glands, the folds of mucosa are not so prominent and these are obliterated by repeated childbirth. There is not much of stagnation in vagina as in the colon due to its advantageous anatomical position where genital tract is constantly draining its content under the action of gravity. The high acidity of vagina no doubt plays an important role in safeguarding any infection of this area, and this factor is also inimical to infection by *E. Hystolytica*. The result is that *E. Hystolytica* cannot survive and set up its reaction even though these are getting access daily into the genital tract. These are my suggestions which need confirmation by further investigations.

While investigating a case of ulcer in the genital tract for the presence of *E. Hystolytica* one has to remember that, in the early stage of infection and when infection is of mild type, there is only superficial rawness in the vagina and cervix with blood-stained vaginal discharge. In this stage it is often undetected. In the stage of ulceration, it may be a pin's head size or an inch or more in diameter or even larger. When the infection is of severe type or of long standing, ulcers are of snail-track type, with rolled up margin and undermined edges, the base being formed by muscular coat which is covered with blackish, greyish or yellowish sloughs. The discharge is offensive and at times profuse. These are the characteristic features of such ulcers. They have to be differentiated from other ulcers of vagina, like carcinomatous, tuberculosis, granulomatous, traumatic and syphilitic ulcers. These can be differentiated by usual clinical, laboratory and histological examination.

While looking for amoebae one should not be satisfied by examining vaginal swab only. The scrapings of the ulcers should be examined for presence of this protozoa as they often attach themselves to the wall of the ulcers. If above procedure is adopted most of the cases of amoebic infection of genital tract, where vagina and cervix is commonly involved, can be diagnosed. In the literature there is mention of uterine infection as well by this protozoa. If that is suspected by enlarged, tender uterus, in cases of amoebic ulcers of vagina, uterine aspiration should be examined. In my opinion one should also try to hunt for evidence

of *E. Hystolytica* from biopsy sections of ulcers and in material from diagnostic curettage.

In investigating these cases vaginal acidity should be determined as a routine. As it is still problematic how either active or cystic form, after getting access, can set up their usual necrotic reaction in intact epithelium and presence of acid vaginal medium. The breach of epithelium or lowered resistance of epithelium by age, trauma and infection, along with lowered vaginal acidity, are perhaps very important predisposing factors for favour of such infection.

In the end I will draw the attention of gynaecologists to investigate all refractory cases of leucorrhoea and vaginal ulcers which do not respond to usual local and general treatment. If we do so, we can find and cure many such cases with ease and satisfaction. This sort of infection is not common in temperate country hence most of the text books are silent about these problems.

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