

**AMOEBIASIS OF THE FEMALE GENITAL TRACT, WITH
REPORT OF A CASE OF INFECTION OF CERVIX AND
VAGINA BY PROTOZOA ENTAMOEBIA HISTOLYTICA.**

by

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Infection of the female genital tract by Protozoa *Entamoeba Histolytica* is a rather rare occurrence. Occasional references have appeared from time to time in the literature. Hegner (1928) was the first to report findings of *Entamoeba Nana* in vaginal washings obtained by Hartman in the course of some experiments on Rhesus monkeys. Before this there was no report from this region either in human beings or in monkeys. Subsequently the following cases were reported by various authors with infection of the female genital tract by *Entamoeba Histolytica*. Lee (1932) reported two cases with amoebic infection of the cervix, in case of carcinoma of cervix. HSU (Cleland, 1944) reported 2 cases of amoebic ulcers and inflammatory process, on condylomatous growths of vulva and carcinoma of cervix. Bacigalupo and associates from Argentina in 1942 reviewed the literature and described one case. May in 1943 reported a case of amoebic vaginitis in an unmarried girl with intact hymen. Bickers in 1943 studying two hundred cases of leucorrhoea observed

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that about 0.5% cases were caused by *Entamoeba Histolytica*, but had not reported any case. In 1943 Morse and Seaton and in 1944 Cleland, Garin (1947), Sen (1949) have also reported such cases. Misra from Calcutta in India, has reported two such cases of amoebic vaginitis in 1950, and two cases of infection of cervix and vagina in 1953. Rose has reported two cases of amoebic vaginitis one in 1937 and other in 1941 from China. De Rivas (1944) reported a case of amoebic infection of the uterus and vagina and Cleland (1944) reported a case of amoebic infection of the vulva. In both these cases, at autopsy the *Entamoeba Histolytica* were detected in the tissues. In Cleland's case amoebic infection complicated granuloma pudendi. 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. Heilbrunn A. from West Borneo, and Isaza Majid from Mexico reported such cases. Balsubrahmanyam M. and Cheriyan, 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. Chatterjee and Manson-Bahr have also mentioned in their standard text books reference about occurrence of infection of female genital tract by *Entamoeba Histolytica*. There is very occasional and rare reference of this condition in text books of Gynaecology. Recently Masani has made some reference to this condition in his text book of Gynaecology. Manson Bahr has reviewed the literature.

Case Report:

The following is the account of the case of infection of cervix and vagina by *Entamoeba Histolytica* which I came across.

Mrs. G. H., Hindu, aged 40 years, was admitted to the Shree Sayaji General Hospital, Baroda, on 8-8-56 with foul smelling, blood tinged, yellowish discharge per vaginam since one month. She also complained of ulcerous area in the region of the vulva. There was accompanying burning micturition. Patient was a multipara with 8 full-term normal deliveries and the last delivery was ten years back. She was regularly menstruating. She gave history of frequency of stools with blood and mucus about a month back. On general examination patient showed slight degree of anaemia. Horizontal group of inguinal lymph glands were palpable. On speculum examination there was a sloughing ulcerated area on the lower one-third of vagina on the anterior vaginal wall, at about 1 o'clock position just behind the urethra, size of about $\frac{1}{2}$ cm diameter with undermined edges, bleeding easily on touch and with yellowish foul smelling discharge. There were also other irregular ulcers on the posterior lip of cervix about $\frac{1}{2}$ cm. in diameter at about 7 o'clock position and in right lateral fornix of vagina about 1 cm. in diameter with irregular outline, bleeding easily on touch with yellowish blood stained foul smelling discharge. Vaginal examination showed cervix was pointing downwards and backwards, irregular, firm and mobile, uterus was anteverted and ante-

fixed, smooth, firm and mobile, normal in size, fornices—nothing abnormal detected. Systemic examination showed nothing particular. Blood pressure was 100 systolic/70 diastolic, Haemoglobin per cent 64%, total W.B.C. count was 7200/c.mm., Polymorphs 64%, Lymphocytes 35%, Eosinophils 1%. Urine examination and stools on admission showed nothing abnormal. Clinically the patient was diagnosed as a case of carcinoma of cervix with metastases in vagina. On 10-8-56, biopsy from the ulcer on the cervix and vagina was taken and on 18-8-56 the pathology report showed only chronic inflammatory changes. Kahn's test was negative. Patient had frequency of stools from 13-8-56 to 16-8-56 for which symptomatic treatment was given. On 30-8-56 sigmoidoscopy was done which showed no evidence of ulcers in the sigmoid and rectum, only mucus secretion was present. Swab was taken for examination, from the rectum which showed presence of *Entamoeba Histolytica* cysts. Patient's condition remained the same as regards the ulcers on vagina and cervix. Again biopsy from the ulcers on cervix and vagina was repeated, on 11-9-56 which also showed presence of chronic inflammatory changes and no evidence of malignancy. On 18-9-56 I sent the vaginal smear from the discharge from the ulcers of vagina and cervix for microscopic examination and the report to my great surprise came that there were plenty of *Entamoeba Histolytica* vegetative forms, with typhoid pseudopodia and typical ingested red blood cells. I again repeated stool examination which showed *Entamoeba Histolytica* vegetative and cystic forms and *E. Coli*, also. During this period patient was given daily Dettol vaginal douches, high protein diet, and antianaemic treatment. On 19-9-56 the ulcers in the vagina and on the cervix were spreading. The ulcer on the anterior vaginal wall had tendency to heal. The patient was discharged at request on 21-9-56 and she got re-admitted on 5-11-56. By this time the ulcer on the anterior vaginal wall had healed leaving behind a raised cicatrised area but ulcers

on the right lateral vaginal wall persisted and some other new, small, discrete ulcers appeared on both lips of cervix and left lateral vaginal wall varying in size from $\frac{1}{2}$ cm. to 1 cm. in diameter, with irregular edges discharging plenty of yellowish mucoid discharge. On 26-11-56 I myself took the vaginal smear from the discharge and the scrapings from the ulcers on cervix and vagina. Myself and my colleague pathologist saw plenty of *Entamoeba Histolytica* vegetative forms with pseudopodia and ingested red blood cells, and a few *Entamoeba Histolytica* Cysts. These were also demonstrated to the medical students. Microphotographs of the vaginal smear slides were taken demonstrating *Entamoeba Histolytica* Vegetative forms with ingested red blood cells and pseudopodia and few *Entamoeba Histolytica* Cysts (Fig. No. 1). The ulcers on the cervix and vagina discharging yellowish mucoid discharge were also photographed (Fig. Nos. 2 and 3). From 26-11-56 onwards patient was treated with injection Emetine gr. $\frac{1}{2}$ with injection strychnine gr. 1/100 daily for 10 days. She was given daily about 60 mgm. each of Vit. B₁ and Vit. B₆ for these ten days. She was also given retention vaginal douche (keeping the solution for about an hour) of 1% Yatren (*Chiniofonum*) solution, for about 10 days. The patient improved rapidly. On 1-12-56 all ulcers were healing rapidly and the stool report showed no evidence of *Entamoeba Histolytica*. On 10-12-56 there were only slight raw areas on both the lips of cervix and right and left lateral vaginal wall, and the lower part of the anterior vaginal wall, where the ulcers previously existed. The discharge per vaginam also practically disappeared. From 10-12-56 patient was given tablet Nivembine (May & Baker), 1 T.D.S. for 12 days. On 13-12-56 the vaginal smear report showed no evidence of *Entamoeba Histolytica*. On 22-12-56 per speculum examination showed that the ulcers in the vagina and on the cervix had healed up leaving behind small cicatrised raised areas. The husband's stool examination also revealed presence of *E. Coli* and *E. Histolytica* cysts. On

8-1-57 the patient's stool report showed presence of *Entamoeba Histolytica* cysts. So patient was given tablet Diodoxylin, 2 tablets three times a day for 10 days. Speculum examination on 7-1-57 showed that the ulcers on cervix and vagina had healed completely. On 10-1-57 urine 24 hours' collection of the patient was examined for presence of *Entamoeba Histolytica* but there was no evidence of the same. Vaginal swab on 10-1-57 taken was also negative. Then on 21-1-57 the vaginal smear and swab report showed no evidence of *Entamoeba Histolytica*, and the stool report on 21-1-57 showed presence of ova of ankylostoma, but no evidence of *Entamoeba Histolytica*. The patient was treated for ankylostomiasis. The vagina and cervix was photographed before discharging the patient showing no evidence of ulcers in vagina or on the cervix (Fig. No. 4). The patient was discharged free of symptoms on 28-1-57.

Discussion

The case was clinically diagnosed as a case of ? carcinoma of cervix, but on investigating the case in detail it turned out to be a case of amoebic vaginitis and amoebic ulcers on cervix.

Amongst the cases reviewed from the literature it is observed that in the infection of the female genital tract by *Entamoeba Histolytica* cervix and vagina are involved in majority of cases. In only one case definite evidence of infection of the uterus was proved. Vulva is also less commonly affected. Amoeba have been demonstrated in ovarian abscess and in inflamed tubes quoted by Stitt and others. Infection of these organs was probably due to direct extent from bowel lesions. There is no definite relation as regards age or parity is concerned. The youngest recorded case was of an unmarried girl of 16 with intact

hymen, and oldest was 70 years of age. In majority of cases the usual complaint on the part of patient is blood stained mucopurulent discharge not associated with pruritus. The discharge is at times continuous unrelated to menstruation. Lower abdominal pain and occasionally burning micturition are also present. There may be history of frequency of stools with blood and mucus in the recent or remote past. Usually the ulcers are shallow, superficial, punched out with slightly overhanging irregular margins, which bleed easily on touch. They are eccentrically placed, and as far as possible away from the external cervical os. The base of the ulcer looks raw and reddish, discharging yellowish slimy mucopurulent discharge. Ulcers in the vagina are usually linear, lying mostly transversely in the furrows between the folds of mucosa. The vagina and cervix is usually soft and oedematous and cervix may be extremely tender. Uterus is often enlarged, soft, engorged and tender. This condition is likely to be confused with granulomas, carcinoma, or infection with *haemophilus Ducreyi*, also tubercular or syphilitic ulcers. The diagnosis rests on the above clinical features mentioned and demonstration of the *Entamoeba Histolytica* vegetative forms with typical pseudopodia with ingested red blood cells and cystic forms, identified in a wet vaginal smear examined by hanging drop technique. In most reported cases there was accompanying amoebic infestation of the intestines. At times evidence of *Entamoeba Histolytica* may be ob-

tained in the biopsy sections taken from ulcers, besides the chronic inflammatory changes. It is possible that many of the cases with associated bulky uteri may have similar involvement. It is possible to diagnose this by aspiration of material from uterine cavity. So far aspiration from the uterine cavity was not done in any such reported cases.

It is still problematical as to how the female genital tract is involved by this infection. It is possible that the following factors might be responsible: (1) High incidence of intestinal amoebiasis and the close proximity of the rectum and the presence in most women of post-partum lax perineum, perineal tears, at times the presence of vesico vaginal and recto vaginal fistulae, (2) low vaginal acidity, (3) improper cleansing habits especially method of ablution practiced by some in India, the infection being carried by the fingers mechanically, and certain unhygienic practices.

In the case reported by me probably the lax perineum, improper cleansing habits and accompanying intestinal amoebiasis was responsible for this condition. This condition responds readily to amoebicidal drugs given parenterally or orally given in adequate dosage, along with cleansing vaginal douches, with incorporated amoebicidal agents. Though this is rather a rare condition it should not be overlooked. I would also suggest to rule out this possibility in tropical and sub-tropical countries where incidence of amoebiasis is high, in every case of ulcerous growth with yellowish slimy mucopurulent dis-

charge. It is also worthwhile to carry out the routine pathological examination of the scrapings and discharge from the ulcers in vagina and cervix to rule out the possibility of infection by *Entamoeba Histolytica*. One should also try to hunt for evidence of *Entamoeba Histolytica* from biopsy section from the ulcers. A routine stool examination should also be carried out and sigmoidoscopy in suitable cases. Examination of aspirated material from uterine cavity may be done in suspected cases of uterine involvement. Urine examination may also be carried out for the presence of *Entamoeba Histolytica*.

Due to the rare occurrence of this condition I was stimulated to report this case.

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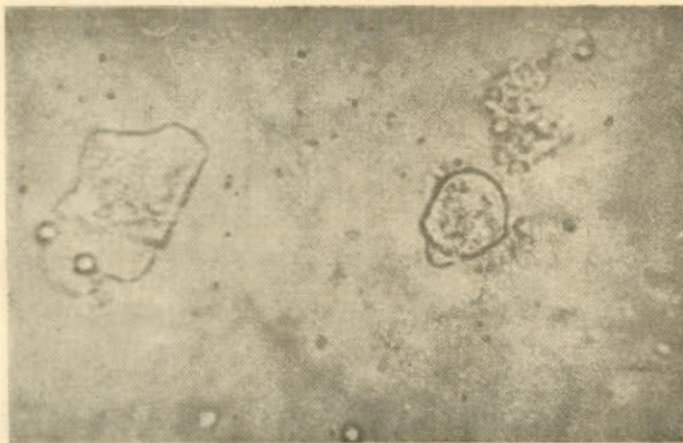


Fig. 1
Microphotograph of the vaginal smear showing *Entamoeba Histolytica* Vegetative forms with ingested Red Blood Cells, and Pseudopodia, and *Entamoeba Histolytica* cyst.



Fig. 2
Photograph showing ulcers on cervix and in vagina, discharging yellowish mucoid discharge.

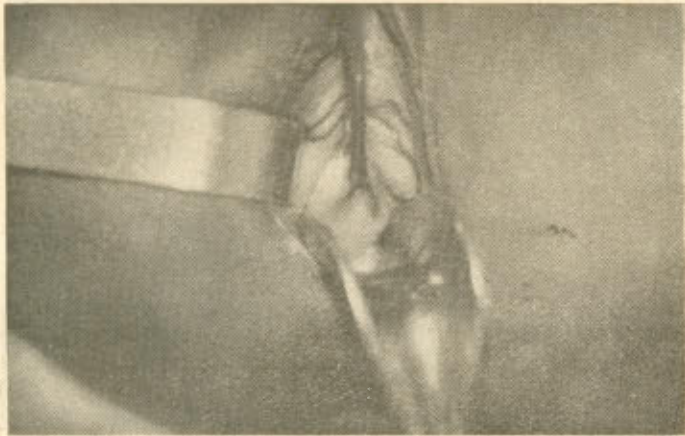


Fig. 3
Photograph showing ulcers on cervix and in vagina discharging
yellowish mucoïd discharge.

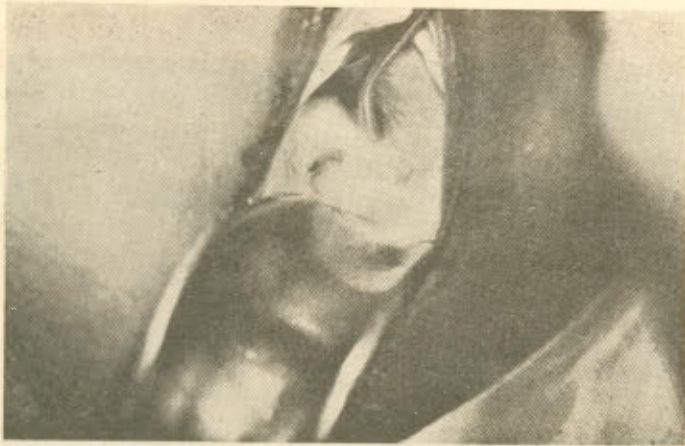


Fig. 4
Photograph showing no evidence of ulcers on cervix and vagina,
which previously existed.