

## CLINICAL MANIFESTATIONS OF GENITAL TUBERCULOSIS IN WOMEN

by

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The subject has aroused the keen interest of gynaecologists and pathologists all over the world within the last decade and very important contributions have been made by the workers. Amongst the earlier ones were Murphy, Greenberg, Jedberg, Auerbach, Schaefer, Emil Novak and others. Within recent years Haines, Stallworthy, Sharman, Sutherland have studied it very thoroughly and recorded the progress made towards its treatment with modern antibiotics and chemotherapeutic agents.

In India, Malkani, Aikat, Misra and others have studied it in different parts of the sub-continent, and the interest created is manifested by its inclusion as one of the main subjects for discussion at the present Congress.

### *Material and Methods*

The authors of the present paper took up the investigation of genital tuberculosis in Assam Medical College. The College is situated in the

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remotest north-eastern corner of India and as it is the only Medical College it attracts patients from all parts of the State of Assam. The geographical position of the State and its very difficult communication facilities with other Indian States has enabled us to follow up a large number of the cases from 1955 to 1958 as most of our cases have returned to us instead of going out of the State.

Some of the cases included in the series attended the clinic for infertility, whereas others attended the hospital for a variety of gynaecological ailments such as amenorrhoea, menorrhagia, chronic vaginal discharge, etc. The diagnosis has been made by a histological examination of the endometrium or cervical biopsy. Wherever possible, fresh specimens of endometrium of histologically positive cases were utilised for animal inoculation, culture and staining of smears for A.F.B. The cultures were made in Lowenstein Jensen and Dorset egg media by concentration method.

During the follow-up also, the items of investigation consisted of histological examination, examination of endometrial smear, cul-

ture and animal inoculation. Some of the cases were treated by radical surgery. This afforded us the chance to find out the affection of tubes, ovaries and cervix, both macroscopically and histologically. Cases where only exploratory laparotomy was done and possibility of radical surgery ruled out also presented opportunities for a study of the gross macroscopical lesions. In cases which were exclusively treated by drugs, the affection of the adnexa could only be determined by bimanual examination.

Whenever the cervix uteri presented any abnormal pathology a wedge was taken for histological study. Besides, the cervixes removed by amputation in course of the performance of Manchester operation, and the cervixes of all uteri removed after total or pan-hysterectomy have been histologically examined. This has enabled us to determine the incidence of cervical affection.

The authors were also curious to find out the prevalence of endometrial tuberculosis in patients affected with pulmonary lesions. With this end in view, one of us (R.B.) examined the endometrial scrapings of 25 cases in the Reid Chest Hospital, Shillong and 5 cases in Assam Medical College. The work had to be abandoned due to heavy pre-occupations in the College itself.

In all the cases included in our series the chest was X-rayed for evidence of pulmonary lesion.

#### *Incidence*

*Endometrial Tuberculosis:* The incidence rate as reported by the different observers shows a wide range

of variation. Sharman records 5.2% incidence rate of endometrial tuberculosis in all cases of primary sterility. Haines (1952) reports a 4% latent tuberculosis in curettings taken from the fertility clinic of the Chelsea Hospital for Women. In India, Misra from Calcutta reports endometrial tuberculosis rate as 5.3%. Malkani from Delhi reports an incidence rate of 8.3% and Sheela Gupta from Gwalior records a fairly high incidence of 9.67%. Rewell from Madras, however, reports a low incidence of 2% amongst South Indian women.

In the Assam Medical College, a routine biopsy is done in all cases of infertility. Between 1955-57 two cases of endometrial tuberculosis could be detected amongst 149 endometrial biopsies examined in the clinic. During the same period 506 samples of endometrium were examined for other gynaecological ailments and in them 17 cases had a positive endometrial pathology. If all cases are taken into account, 19 cases have been detected from out of 655 samples, giving a 3% incidence. During this 3 year period 1,492 gynaecological cases have been treated as hospital in-patients. Thus cases of pelvic tuberculosis from 1.34% of all the gynaecological cases.

*Salpingitis:* Novak has observed: "The finding of endometrial tuberculosis (diagnosable by curettings) makes it almost certain that tubes are involved".

In our series, laparotomy was done in 5 cases of endometrial tuberculosis. In the rest, tubal pathology has to be determined and estimated by bimanual examination.



Of these 5 cases panhysterectomy was done in 3 cases, but in only two was there histological evidence of tubercular salpingitis in association with endometritis. In the third only the endometrium was affected. One case had a medium sized ovarian cyst with bilateral tubo-ovarian mass. Tuberculosis was not suspected. Ovariectomy and bilateral salpingectomy was done. Histological examination of the tubes showed tubercular salpingitis. Endometrial biopsy taken later showed tubercular endometritis.

Laparotomy was done in a case of tubercular endometritis with bilateral pyosalpinx. Due to marked adhesions the tubes could not be removed in this case. So of the 5 cases of tubercular endometritis operated on there was evidence of tubercular salpingitis in 4.

12 cases of tubercular endometritis were not operated. In 7 of these there was palpable evidence of salpingo-oophoritis. In the rest the tubes could not be felt.

*Cervix:* In our series only 2 cases of tubercular cervicitis have been recorded. From 1955 to 1957 histological examination of 216 cervixes were done in the Assam Medical College. The material was mostly obtained by wedge biopsy from cases showing cervical pathology. Besides these, as already mentioned, cervixes removed after Manchester operation, amputations as well as cervixes of all cases of hysterectomy were histologically examined. The incidence thus works out to be less than 1 p.c. Mitra also records a similar incidence in Calcutta.

In one of these cases total hysterectomy and unilateral salpingo-oopho-

rectomy was done. The tubes and the endometrium did not show any evidence of tuberculosis histologically. The other case had a proliferating type of growth in the endocervix so much so as to resemble carcinoma. While undergoing anti-tubercular treatment the condition deteriorated. A laparotomy performed for signs of obstruction of the bowels showed extensive peritonitis. She expired at a later date.

*Age Incidence:* All the cases in the series are in the age group between 20 to 40 years.

*Pulmonary Involvement:* In 2 cases only acid fast bacilli were found in the sputum. In all cases of endometrial and cervical affection the lungs were X-rayed. But only in one case was pleural exudation and pleural thickening noticed. This is in addition to the sputum positive cases.

It has already been mentioned that we carried out an investigation to find the number of cases of genital tuberculosis where a pulmonary lesion was present. For this, one of us (R.B.) examined histologically 30 specimens of endometrium removed from cases of pulmonary T.B. admitted to the Reid Chest Hospital, Shillong and in Assam Medical College but in none of the cases was there histological evidence of endometrial tuberculosis. The number of cases investigated is a small one. But Cameron (1951) noted an apparent infrequency of genital lesions amongst sanatorium patients. Only 8 out of 1,000 cases of pulmonary tuberculosis had genital tuberculosis. Jedberg on the contrary found an incidence of 5 p.c. in sanatorium patients. Post-mortem studies, however, show that



in patients dying of pulmonary tuberculosis the genital system is often involved.

#### *Bacteriological Examination*

Smears of cervical secretion were examined in 14 cases for acid fast bacilli. Positive findings were obtained in 9. Animal inoculation was done in all cases. Positive results were obtained in 8. Smears taken from homogenised endometrium were examined in 12 cases but acid fast organisms were found in 4.

#### *Symptoms*

*Infertility:* Primary infertility was the main feature in 6 cases. One child infertility was seen in three. In 4 cases there was a long period of infertility after 4 children were born. In the rest number of children varied from 4 to 8.

*Amenorrhoea:* As many as 8 cases of the series had amenorrhoea when first seen. Of these 5 were parous women and 3 were multiparae. The shortest period of amenorrhoea was only 2 weeks, whereas the longest was 12 years.

In 4 cases there were adnexal inflammatory masses in association with amenorrhoea. In 1 case the sputum showed acid fast bacilli. Endometrial biopsy undertaken to determine the cause of amenorrhoea revealed endometrial pathology.

*Menorrhagia:* 5 cases complained of menorrhagia. They were treated outside by general practitioners with various endocrine preparations but to no effect. Diagnostic curettage was done in hospital and histological examination elicited the cause.

Oligomenorrhoea and acyclic bleeding was found in 2 cases. Irregular vaginal bleeding was complained of by one case of cervical tuberculosis. In the rest the menstruation was unaffected.

*Other Symptoms:* 2 patients had pyrexia when first seen. 5 cases complained of pelvic pain; one case had diarrhoea; and one case, symptoms of intestinal stasis.

#### *Treatment*

*Endometrial Tuberculosis:* Pan-hysterectomy was performed for three cases. Post-operatively these were treated with anti-tubercular drugs. Follow-up examination has shown freedom from any extragenital lesion. One case has been followed up for 4 years since operation; others upto 1½ years.

*Drug Treatment:* Streptomycin was combined with isoniazid or P.A.S. In some cases the patients wanted to have the treatment outside and expressed their difficulties about injections. So only isoniazid was prescribed.

*Combination of Streptomycin and Isoniazid:* Streptomycin 1 gram I.M. daily and isoniazid 100 mgm. twice daily was given for two months. Where the endometrium became histologically free, yet the adnexal thickening persisted, streptomycin was continued in 1 gm. dose bi-weekly and isoniazid 100 mgm. twice daily for another 3 months or more depending on pelvic findings. Wherever histological evidence or the symptoms persisted daily injections of streptomycin in combination with isoniazid

were continued for another 6 weeks after which the examinations were repeated.

*Combination of Streptomycin and P.A.S.:* Streptomycin 1 gm. I.M. daily and P.A.S. 4 gm. 3 times a day was given for 6 weeks. Then streptomycin 1 gm. bi-weekly and P.A.S. 12 gm. daily was given for another 6 weeks. Further continuance depended in the results of follow up investigations

*Isoniazid alone:* 2 cases were treated with 200 mgm. given daily for a period of 6 months.

*Result of Treatment:* 11 cases have been treated with streptomycin and isoniazid. 3 cases have been found to be histologically and bacteriologically free, the maximum period of follow-up of these cases being three years and the minimum being 1 year. In the rest the treatment is continuing.

1 case treated with streptomycin and P.A.S. has been found to be histologically and bacteriologically free. It has been followed up for 1½ years. The 2 cases which were treated with isoniazid alone are histologically and bacteriologically cured.

*Cervical Tuberculosis:* One case of tuberculosis of the cervix was treated with hysterectomy and received anti-tubercular drugs post-operatively. She has remained well. The second case of tuberculosis of the cervix developed peritonitis while undergoing treatment and ultimately expired.

*Relief of Symptoms:* None of the cases investigated conceived subse-

quently. All the cases who complained of lower abdominal pain were relieved. In 8 cases of amenorrhoea menstruation was reinstated in 3.12 cases of menorrhagia were relieved.

#### *Conclusion:*

Though the number of cases included in this series is small it has enabled us to obtain useful information. The incidence of endometrial tuberculosis in this North-Eastern State of India appears to be much lower than what has been found in other parts of Northern India and West Bengal. Fewer cases have been found from amongst those attending the Fertility Clinic although a routine endometrial biopsy is done in every case in the second half of the cycle. The bulk of our cases have been detected from the cases attending the hospital for a variety of gynaecological troubles, most of the disorders being of menstrual origin. Curettage was carried on only in a limited number of cases. It is just possible that more cases may come into light if a routine biopsy is done even for minor menstrual complaints.

Though it is generally believed that genital tuberculosis is secondary to primary lesions elsewhere, our routine X-ray of the lungs in all cases of endometrial tuberculosis has shown evidence of pulmonary lesion in 2 cases.

Endometrium and fallopian tubes were mostly affected. As the majority of cases received drug treatment it was not possible to determine the incidence of lesion in the ovaries. Tuberculosis of the vagina and vulva which is usually rare was not seen in any of the cases.



Surgery, though undertaken for only a limited number, has given very good results.

Although the investigations and follow-up of all the cases that were given drug therapy is not complete, the results so far obtained have been very encouraging.

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