

SUCCESSFUL PREGNANCY FOLLOWING DRUG THERAPY FOR GENITAL TUBERCULOSIS

by

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The outlook for successful full-time pregnancy in a proved case of genital tuberculosis, in spite of all the achievements in the drug therapy of genital tuberculosis within recent years, is still poor indeed. Up to 1958, in the world literature, only ten full-time pregnancies following drug therapy for genital tuberculosis have been recorded (Earn A. A., 1958). Disturbed tubal gestation or intra-uterine abortion is the usual fate in such cases of genital tuberculosis, even after effective treatment with antituberculous drugs. Therefore any case of successful pregnancy following drug therapy for proven genital tuberculosis is worth reporting. One such case is recorded below, with a consideration of the present state of knowledge of genital tuberculosis in relation to infertility.

Case. Mrs. S. B. (Registered Number 2515/61), aged 26 years, married 1 year, primigravida, carrying full-time pregnancy, was admitted as an emergency case in the Obstetric Unit on the 19th March, 1961. She complained of amenorrhoea since the 16th June, 1960, and pain in abdomen since the 18th March, 1961.

Past History. She was first seen in the

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surgical unit in 1955 when she was single and aged 21 years. At that time she was suffering from occasional vague pain in the right iliac fossa for which barium meal X-ray was taken. With the suspicion of chronic appendicitis, appendicectomy was done in the surgical unit on the 1st of August, 1956. During this operation multiple tubercles were found over the serous coat of both the fallopian tubes for which the diagnosis of tuberculous salpingitis was made. The patient was referred to the Gynaecological Unit for investigation and treatment of genital tuberculosis.

From 1956 to 1958 she was suffering from irregular evening rise of temperature upto 100°F. and pain in the lower abdomen as well as in the lumbo-sacral region.

Menstrual History. She had her menarche at the age of 14 years. It was regular at an interval of one month with moderate amount of flow lasting for 4-5 days. Since 1956, she had been suffering from scanty periods lasting for 2-3 days associated with congestive type of dysmenorrhoea.

In the gynaecological unit when she was first examined in 1956, uterus was found to be of normal size, retroverted in position with restricted mobility; cervix was nulliparous and healthy. Masses could be palpated through both the culs. A provisional diagnosis of genital tuberculosis was made.

Investigations done from 1955 to 1958. Examination of blood for sedimentation rate and sputum for acid-fast bacilli were done from time to time. But nothing suggestive could be detected.

Skiagram of the chest was taken 4 times during this period but no abnormality was found.

Mantoux test was positive at 1 in 10,000 dilution on 13th September, 1956.

Endometrial biopsy was done thrice during this period but there was no evidence of endometrial tuberculosis. The report of endometrial biopsy on each occasion was non-secretory endometrium.

Menstrual blood was cultured on the 26th November, 1956, for acid-fast bacilli and that showed growth of tuberculous bacilli. Subsequently, after continuing antituberculous treatment for some time, menstrual blood culture was repeated on 3 more occasions, but there was no further growth of organisms.

Vigorous anti-tuberculous therapy was started with (i) Inj. Streptomycin 1 gm. intramuscularly every other day upto 30 injections and twice weekly afterwards, (ii) para-amino-salicylic acid, 4 gms. orally 3 times a day and (iii) Isoniazid 100 mg. orally 3 times a day.

The treatment was continued for 2 years with repeated checking up of general health, clinical improvement, blood sedimentation rate, sputum for acid-fast bacilli, skiagram of the chest, endometrial biopsy and menstrual blood culture for acid-fast bacilli.

The patient's condition improved considerably since 1959. She was gaining weight, there was no more abdominal pain or evening rise of temperature. Menstrual cycle became regular and flow was also normal. Adnexal masses could no longer be palpated. The patient was declared cured of genital tuberculosis and the treatment was discontinued. She was kept under strict observation and was attending the gynaecological follow-up clinic regularly.

She married in 1960 and within 3 months she became pregnant. She had her last normal menstruation on the 16th June, 1960.

Pregnancy. Mrs. S. B. was attending the antenatal clinic regularly from the very beginning. Her pregnancy continued uneventfully. She was admitted on the 19th March, 1961, with false labour pains.

Her general condition on admission was found to be good. There was no pallor. Blood pressure was 110/70 mm. Hg. and there was no oedema or albuminuria.

On abdominal examination, uterus was found to be of term size, vertex presenting, left occipito-anterior in position, head engaged with foetal heart sounds in the left lower quadrant.

Labour. Started spontaneously on the 23rd March, 1961 (40 weeks pregnancy). She was delivered normally after 19 hours and 25 minutes of labour. The blood loss was about 3 ounces (90 ml.). The placenta with cord and membranes was expelled spontaneously and was sent for histological and bacteriological examination which was proved to be negative subsequently.

The baby was a girl, weighing 5 lbs. 6 ozs. and cried immediately after birth.

Puerperium. The mother was afebrile throughout the puerperium. The baby was fully breast-fed. Skiagram of the chest and blood sedimentation rate suggested nothing abnormal. Eight days post-partum examination of the mother showed an anteverted involuting uterus. There was no palpable adnexal mass in the pelvis. The mother and the baby were discharged on the 1st April, 1961.

Mrs. S. B. and her baby attended the post-natal clinic on the 2nd May, 1961. Pelvic examination of the mother showed well involuted anteverted uterus with no other pelvic pathological findings. She was advised to return in 3 months for further check-up. The infant was well and gaining weight normally.

Discussion

It is a mystery why successful pregnancy is not possible even after cure of genital tuberculosis. A few theoretical possibilities are mentioned below :

(1) *Tubal occlusion.* Progressive narrowing of lumen of the fallopian tubes may occur by tuberculous endosalpinx (Halbricht, 1957). But in 50 per cent cases, fallopian tubes are patent. Mere patency of the fallopian tubes may not be sufficient for conception to occur, because the tubal musculature may be irreversibly damaged so that there may not be

any peristaltic movement of the fallopian tubes.

(2) *Anovular cycle*. This is present in 37.5 per cent cases (Sutherland, 1955). Tuberculosis in general and genital tuberculosis in particular influence the whole body but mainly the "neurohormonal sexual system" and may affect the chain formed by cerebral cortex — mid-brain — pituitary—ovary and uterus.

(3) *Hypoplastic Uterus*. It is still doubtful whether this is a cause or effect of genital tuberculosis.

(4) *Amenorrhoea* due to

(a) *Hormonal Abnormality*. Absence or decrease in the amount of oestrogen and progesterone or increase in 17 keto-steroid level.

(b) *Uterine Origin* (end organ failure). This is characterized by atrophic endometrium with normal hormonal secretion. Endometrium is dependent on alkaline phosphatase for its nutrition and growth. Again, calcium is important in normal metabolism of alkaline phosphatase. Calcium metabolism is profoundly disturbed in tuberculosis. Liver again is the site of production of this enzyme. In tuberculosis, metabolism of liver may be disturbed. For this reason, endometrium may be atrophic.

(6) *Endometrial Fusion in Advanced Genital Tuberculosis*. Prospect of child-bearing is fair if adhesions can be freed under direct vision along with antituberculous drug therapy.

It is obvious that bilateral occlusion of fallopian tubes or atrophic endometrium with formation of uterine synechae reasonably excludes all possibilities of conception. But there is no reason why pregnancy should

not occur if there is no irreversible anatomical change in the genital tract.

Patients with genital tuberculosis may be divided into two groups.

Group I. At near about the age of puberty. Intra-uterine pregnancy is very unusual but ectopic pregnancy may be observed.

Group II. Several intra-uterine pregnancies are observed in patients with late genital tuberculosis.

With improved methods, more and more infertile patients are detected in the earliest phase of silent genital tuberculosis. With better antituberculous drug therapy prospect of successful pregnancy should certainly be better. Therefore, conservative treatment of genital tuberculosis with anti-tuberculous drugs and a strict long-term follow-up are justified in women of reproductive age group.

Summary

(1) A case of successful pregnancy following drug therapy for genital tuberculosis is reported.

(2) Diagnosis of genital tuberculosis was confirmed by

- (a) observing tubercles over the fallopian tubes during appendicectomy;
- (b) positive menstrual blood culture for acid-fast bacilli.

(3) Anti-tuberculous drug therapy consisted of Injection Streptomycin combined with para-aminosalicylic acid and Isoniazid. The rigid drug therapy was continued for 2 years.

(4) The patient is still kept under observation to detect if there is any recurrence of genital tuberculosis.

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References

- Barnes T., Smith H. G. M. and Snaith L. M.: *Lancet*; 1, 817, 1953.
- Bromberg Y. M. et al: *J. Obst. Gyn. Brit. Emp.*; 61, 121, 1954.
- Earn A. A.: *Ibid*; 5, 739, 1958.
- Haines M.: *Ibid*; 59, 721, 1952.
- Halbrecht I.: *Obst. and Gyn.*; 6, 174, 1955.
- Halbrecht I.: *Ibid*; 10, 73, 1957.
- Malkani P. K. et al: *Fertil. Steril.*; 7, 356, 1956.
- Rabau I.: *J. Obst. and Gyn. Brit. Emp.*; 59, 743, 1952.
- Ryden A. K. C.: *Acta. Obstet. Gynaec. Scant.*; 37, 114, 1958.
- Sutherland A. M.: *J. Obst. and Gyn. Brit Emp.*; 61, 614, 1957.