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The Changing Pattern of Tuberculosis of the Female Genital Tract. A Thirty Year Survey

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Summary. Between 1st January, 1951 and 31st December, 1980, 704 women with proven tuberculosis of the genital tract were investigated. The previous obstetrical history, age incidence, presenting symptoms, and pelvic findings have been reviewed in 10-year periods. The incidence of previous pregnancies rose in successive periods and the average age increased. The main differences in the presenting symptoms were a lessening in the frequency of amenorrhoea and vaginal discharge and an increase in postmenopausal bleeding. The incidence of palpable adnexal masses decreased in successive 10-year periods. Short drug courses were mainly employed in the earlier years and longer courses in the later years. The drugs used initially were streptomycin, PAS and isoniazid, ethambutol and rifampicin being introduced later. The incidence of surgical treatment following failure of drug therapy was much higher in those who had received short drug courses than in those who had received longer ones.

Key words: Gynaecological tuberculosis – Obstetrical history – Age incidence – Symptoms – Pelvic findings – Drug treatment – Surgical treatment

Introduction

In 1951 I founded a weekly Clinic for the investigation, treatment and follow-up of women with suspected or proven tuberculosis of the genital tract (Sutherland 1977, 1981). At that time I wrote to all Consultant Gynaecologists and Chest Physicians in the Glasgow area, offering to see women with suspected or proven tuberculosis of the genital tract, whether treated or untreated. At first the numbers attending were small but they gradually increased and I now see about eight patients each week. Gynaecological tuberculosis is a relatively common condition in the West of Scotland (Sutherland 1979). Thanks to excellent support from colleagues throughout this area, 704 women with proven

tuberculosis of the genital tract were under my care between 1st January, 1951 and 31st December, 1980. Immigration has not been an appreciable factor in this study. Only 11 patients (1.6%) came from other countries, seven from Asia, three from Western Europe and one from the USA. It was recently stated by Somner (1978) that Scotland has no immigrant problem at present because it is too cold.

As time went on it gradually became apparent that the general pattern of gynaecological tuberculosis in the West of Scotland was changing in certain respects. In order to study this matter, I decided to compare various aspects in 10-year periods between 1951 and 1980. The numbers of patients were 421 between 1951 and 1960, 200 between 1961 and 1970 and 83 between 1971 and 1980.

This fall in the incidence of female genital tuberculosis is in agreement with published figures for the incidence of tuberculosis in general throughout the Western world. Dunea (1982), however, suggested that the incidence of tuberculosis in the United States may now be rising. He says that "an estimated 15 million Americans are harbouring inactive tubercle bacilli in their body, waiting to break down at times of decreased resistance. In disease these organisms are becoming increasingly resistant to drugs".

Clinical Features

Obstetrical History

The incidence of previous pregnancies in the three 10-year periods is seen in Table 1, which shows an increase in each group compared with the preceding one. These figures have been adjusted to exclude unmarried patients, none of whom had been pregnant.

Age Incidence

Hutchins (1977) reported 21 cases of female genital tuberculosis in 44,333 gynaecological admissions in Aukland, New Zealand between 1969 and 1976. The average age of the 21 patients was 42 years, with a range of 24–80 years. This study showed an age distribution different from that generally accepted for gynaecological tuberculosis. In earlier surveys, most patients were from 20 to 30

Table 1. Obstetrical history

	Number of patients	Average incidence of pregnancies (%)
1951–1960	421	14.1
1961–1970	200	15.8
1971–1980	83	28.8

years of age, whereas in Hutchins' series most were over 40. Ylinen (1961), in a series of 348 patients with gynaecological tuberculosis, found that 65% were aged 35 years or under.

In Table 2 the average age of the patients in the present series when first seen is shown. These figures indicate an appreciable increase in each group compared with the previous one and support the view of Hutchins (1977) that the age distribution of female genital tuberculosis has changed in recent years.

Presenting Symptoms

The incidence of the various presenting symptoms in the three 10-year periods is shown in Table 3. The most striking differences are in amenorrhoea, vaginal discharge, and postmenopausal bleeding.

Amenorrhoea. Ylinen (1961), in an important monograph on 348 proven cases of female genital tuberculosis, noted amenorrhoea in no less than 85 (24.4%). In the present series amenorrhoea was present in 7.6% in the first 10 years, 2.0% in the second 10 years and in no case in the third 10 years. Vaginal discharge was the presenting symptom in 5.2% in the first 10-year group, 2.5% in the second and in none in the third. When present there was usually a cervical or vaginal infection sufficient to explain the discharge, which is not a symptom of gynaecological tuberculosis.

Table 2. Age incidence

	Number of patients	Average age in years
1951–1960	421	28.2
1961–1970	200	33.0
1971–1980	83	38.9

Table 3. Presenting symptoms

	Total patients 704	Infertility 307 (%)	Pain 179 (%)	Bleeding 127 (%)	Amenorrhoea 36 (%)	Discharge 27 (%)	Postmenopausal bleeding 16 (%)	Miscellaneous 12 (%)
1951–1960	421	43.9	26.6	16.4	7.6	5.2	–	0.2
1961–1970	200	46.0	25.0	18.5	2.0	2.5	4.5	1.5
1971–1980	83	36.2	20.5	25.3	–	–	8.4	9.6

Postmenopausal bleeding did not occur in the first 10 years but the incidence was 4.5% in the second group and 8.4% in the third. The question of postmenopausal tuberculosis of the female genital tract has been fully discussed in a recent publication (Sutherland 1981). Miscellaneous conditions included prolapse, the discovery of unsuspected tubal tuberculosis in patients requesting sterilisation and the finding of tubal tuberculosis following hysterectomy for pre-invasive carcinoma of cervix.

Pelvic Findings

The incidence of palpable adnexal masses in the three 10-year periods is shown in Table 3. It will be seen that such masses were most frequent in the first group and least frequent in the third.

Treatment

1. Drug Treatment

The various drug programmes employed between 1951 and 1960 are shown in Table 5. At the outset the only available anti-tuberculosis drugs were streptomycin and PAS, isoniazid being added later. Short drug courses were used in the earlier years, in accordance with prevailing views on the treatment of other types of tuberculosis.

Table 4. Incidence of pelvic masses

	Number of patients	Average incidence of masses (%)
1951–1960	421	52.0
1961–1970	200	44.2
1971–1980	83	26.5

Table 5. Drug treatment, 1951–1960 (421 patients)

Streptomycin and PAS for 3 months	178 (42.3%)
Streptomycin and isoniazid for 3 months	84 (20.0%)
PAS and isoniazid for 6 months	62 (14.7%)
Streptomycin, PAS and isoniazid for 18 months or 2 years	26 (6.2%)
PAS and isoniazid for 1 year	23 (5.5%)
Miscellaneous schedules	6 (1.4%)
Surgery only	4 (0.9%)
Apparent spontaneous cure	14 (3.3%)
Refused treatment	24 (5.7%)

The results obtained were by no means satisfactory. The failure rates when further measures, either medical or surgical were required, were 42% after streptomycin and PAS for 3 months, 26% after streptomycin and isoniazid for 3 months, 36% after PAS and isoniazid for 6 months and 41% after PAS and isoniazid for 1 year.

Towards the end of this decade a longer drug regimen was introduced. Initially streptomycin, PAS and isoniazid were employed. After 120 days the streptomycin was withdrawn and the PAS and isoniazid were continued until 18 months from the start of the course. If bacteriological confirmation of the diagnosis was obtained, if symptoms persisted or recurred during the course or if pelvic masses failed to resolve, the PAS and isoniazid were continued for a further 6 months. Of the 373 patients who received recognised drug schedules in the first decade, only 7.0% were given this longer treatment programme.

In six instances in which the drug course is classed as miscellaneous, the patients had been treated before referral to me with various drug schedules which did not fit into any recognised category. In four others surgery only had been employed at least 6 months before referral and drug therapy was not then indicated. In 14 cases I did not see the patients for 1 year or more after the initial diagnosis of gynaecological tuberculosis and they remained well and negative for 3 or more years at follow-up, without drug therapy. They have been classed as apparently cured spontaneously. Treatment was refused in 24 instances. These patients included those who would not accept drug therapy after the details had been explained to them at follow-up, those who agreed to be treated but then defaulted and those who emigrated before treatment could be started.

The drug regimens employed between 1961 and 1970 are shown in Table 6. The anti-tuberculosis drugs used during this period were still streptomycin, PAS and isoniazid. Of 158 who had received recognised drug programmes, 152 (96.2%) were treated for 18 months or 2 years and only six (3.8%) had short treatment schedules. Surgery only was used in 15 cases and eight patients refused drug therapy.

The drug schedules administered between 1971 and 1980 are shown in Table 7. At first streptomycin, PAS and isoniazid were used as before. Although the results with this drug combination were appreciably better than those following the shorter courses, there was a failure rate of 12.0% at follow-up.

Table 6. Drug treatment, 1961–1970 (200 patients)

Streptomycin, PAS and isoniazid for 18 months or 2 years	152 (76.0%)
Streptomycin and isoniazid for 3 months	3 (1.5%)
Streptomycin and PAS for 3 months	2 (1.0%)
PAS and isoniazid for 1 year	1 (0.5%)
Miscellaneous schedules	19 (9.5%)
Surgery only	15 (7.5%)
Refused treatment	8 (4.0%)

Table 7. Drug treatment, 1971–1980 (83 patients)

Rifampicin, ethambutol and isoniazid for 1 year	37 (44.6%)
Streptomycin, PAS and isoniazid for 18 months or 2 years	24 (28.9%)
Streptomycin, ethambutol, and isoniazid for 18 months	21 (25.3%)
Miscellaneous schedules	1 (1.2%)

Table 8. Surgical treatment

	Number of patients	Treated surgically
1951–1960	421	59 (14.0%)
1961–1970	200	8 (4.0%)
1971–1980	83	3 (3.6%)

The next drug programme introduced was streptomycin, ethambutol and isoniazid for 18 months. After 120 days on the three drugs, the streptomycin was stopped and the ethambutol and isoniazid were continued until 18 months from the start of the course. The failure rate with this drug combination at follow-up was 14.3%.

Finally, the regimen at present in use was introduced, the drugs being rifampicin, ethambutol, and isoniazid. After 90 days on the three drugs, the ethambutol was withdrawn and the rifampicin and isoniazid were continued until 1 year from the start of the course. The failure rate at follow-up was 2.7%.

2. *Surgical Treatment*

The percentage of surgical treatment in the three decades is shown in Table 8. Patients were included only when previous drug treatment had been unsuccessful. Where surgery had been employed to remove non-tuberculous masses such as uterine fibroids or ovarian tumours or when a diagnosis of tuberculosis was made only after examination of tissues removed at operation, these patients were excluded from Table 8. It will be seen that surgical intervention to cure the tuberculous pelvic condition was required much more frequently in patients treated with short drug programmes than in those who had longer regimens.

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