Female genital tuberculosis in Uganda

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Abstract

A retrospective clinico-pathological study of 39 cases of female genital tuberculosis (FGTB) observed from 1976 – 1986 was conducted in the Department of Pathology, Medical School, Makerere University. The frequency of FGTB was 30.8% in 1976 declining to 2.6% in 1979 and 1984. There was a 17.9% frequency in 1978 and 10.3% frequency in 1983. The remaining years had lower frequencies. There were no cases received in 1980 probably because this was the period when there was socio-political turmoil in the country. The most reported symptom was abnormal bleeding, n=14, (35.9%) and the least reported was ammenorrhoea, n=8, (20.5%). Some patients reported more than one complaint. The endometrium was the most affected site accounting for 71% of the total sites affected. The least affected site was vulva accounting for 3%. Multiple site involvement was also seen in some patients.

Introduction

Tuberculosis is one of the most important causes of morbidity and mortality in developing countries and the incidence of female genital tuberculosis parallels closely the overall prevalence of tuberculosis in a community. In India, tuberculosis was diagnosed in 0.7% of gynaecological admissions5. It was diagnosed in 7.2% of 150 women with infertility and 2.8% of 47 women with gynaecological problems in Chandigarh, India. Tripathy et al examined the incidence of infertility in genital tuberculosis in Cuttack, India and found it to be 58% of 97 cases of infertility with genital tuberculosis studied. In New Delhi, Kumar and Mittal found 6.3% of 48 patients with primary amenorrhoea clinically analysed in a period of 3 years to have genital tuberculosis. In Bombay, India, 117 women with a tubal factor were found to have tuberculosis as the cause of tubal blockage. In Mumbai, India, Chavhan et al found genital tuberculosis in 6.3% of all patients who underwent hysterosalpingographs (HSGs) and 7.5% of all patients investigated for infertility. Liomba and Chipangwii found 90 cases of genital tuberculosis diagnosed in Malawi during an 11-year period7. In Rwanda, Mukantabana found 6.5% of 92 endometrial biopsies for primary infertility to be caused by endometrial tuberculosis. In Ethiopia, Abebe et al found 25 clinically suspected cases of female genital tuberculosis to be positive after various methods of diagnostic investigation. In Uganda one of the 22 countries with the highest global burden of tuberculosis, reports on female genital tuberculosis are scanty. However, tuberculosis accounts for 15000 deaths per year representing 4% of deaths and 3% of Years of Life Lost. In this paper we report cases diagnosed in routine histopathology services in Uganda during a ten year period from 1976 to 1986.

Method

During the period 1st Jan 1976 – 31st Dec.1986, Makerere University Medical School Department of Pathology was the only place which provided histopathology services from within the country and some times beyond. All cases that were reported as female genital tuberculosis were retrieved and recorded. In each case, histological sections and clinical data were retrieved and recorded. Cases which had poor sections were reprocessed. Poorly preserved sections and blocks plus cases which had no clinical details were excluded. All new and old sections for each case were re-examined by the authors.

Inclusion criteria


Exclusion criteria

All cases with insufficient bio-data, cases outside the period of diagnosis and those wrongly diagnosed as female genital tuberculosis. Three cases were excluded because of lack of histology materials.

Results

During the study period 1976-1986, 39 cases of female genital tuberculosis were recorded. Patients' age ranged...
from 16 to 46 years with a mean of 28 years. The commonest age group was 21-30 years representing 19 cases (48.7% of the cases studied). The summary of age groups and their frequencies is shown in figure I.

Figure I: Age groups and frequencies

The main presenting symptoms were abnormal bleeding, $n=14$, accounting for (35.9%), infertility, $n=11$, (28.2 %), and abdominal distension, $n=11$, (28.2%). Amenorrhea was the least complaint reported with $n=8$, 20.5%. Pain and other complaints accounted for 23.1%, $n=9$ and 25.6%, $n=10$ respectively. The total of the percentages above is more than 100% because of multiple symptoms reported in some of the patients. The summary is given in Figure II

Figure 2. Main presenting symptoms
The commonest site involved was the endometrium accounting for n=28 (71%), and the least affected was the vulva representing n=1 (3%), Details are shown in figure III.

Figure 3: Sites involved and their percentages

The number of genital tuberculosis cases received in the department of Pathology between 1976 and 1986 showed 1976 as the year with highest number of cases received n=12. There was undulation decline in subsequent years with the lowest recorded in the years 1979 and 1984 n=1. Since no cases were received in 1980, this year was skipped from the graph. The summary is shown in Figure IV

Figure 4: Number of cases sent for histology from 1976 to 1986.
The health centers which sent genital tuberculosis biopsies between 1976 and 1986 had Mulago national referral hospital and Nsambya hospital sending six cases each, followed by Rubaga and Mutolore with four cases each. The rest of the hospitals sent minimal number of cases with one case as the lowest. The summary of the results is shown in Table 1.

Table 1: The health centers that sent biopsies of the female genital tuberculosis between 1976 and 1986.

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Cases</th>
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<tbody>
<tr>
<td>Mulago National Referral Hospital</td>
<td>6</td>
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<tr>
<td>Nsambya Hospital</td>
<td>6</td>
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<tr>
<td>Rubaga Hospital</td>
<td>4</td>
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<tr>
<td>Mutolore Hospital</td>
<td>4</td>
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<tr>
<td>Lacor</td>
<td>3</td>
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<td>Nyakibale</td>
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<td>Tororo</td>
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<td>Bundibugo</td>
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<tr>
<td>Kabale</td>
<td>1</td>
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<tr>
<td>Kitgum</td>
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<td>Matany</td>
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<td>Iganga</td>
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Discussion

Female genital tuberculosis is common in countries where pulmonary tuberculosis is widespread. It is relatively frequent in developing countries and most cases occur in young women of childbearing age. Improved diagnostic techniques such as Polymerase Chain Reaction (PCR) for mpt 64 gene of Mycobacterium tuberculosis (MTB), smear microscopy, culture of tissue and fluid sample, chromohydrotubation, Purified Protein Derivative (PPD) skin test reaction, endometrial curettage and biopsy, histological examination of curettage, hysterosalpingography, bacterial examination of menstrual blood, laparoscopy and ultrasonography help in its detection.

According to the results, no cases were seen below puberty. This is in agreement with the general finding that genital tuberculosis is rare before puberty. This was also the finding with a study done in France in 1997 by Benchekroun et al. In this study, the commonest site of infection was the endometrium accounting for 71% of the cases. This finding is similar to a study done in Iran in 2001 by Namavar et al, which detected TB endometritis in 72.03% of the cases studied. This finding is however different from the study done in Ethiopia in 2004 by Abebe et al, which showed that samples taken from the fallopian tubes were more frequently positive than those from the endometrium. It is also different from the study done in Alabama at Birmingham in 2004 by Aliyu et al, which showed that the fallopian tube was the organ commonly affected. A study done in Calcutta Medical Research Institute in 1996 by Chowdhury also found that the fallopian tubes were commonly affected and this represented 95-100% of all cases studied.

A study done in Madagascar in 2003 by Rakoto-Ratsimba et al also found out that the fallopian tube was one of the common locations followed by endometrium and ovary.

In our study, the commonest location was endometrium basically because it is much easier to access it surgically without affecting the fertility of the woman unlike the fallopian tube which can not regenerate. In other studies, more than one method of diagnosis of fallopian tuberculosis was used and this could probably explain the difference. There was one case of pyometra diagnosed in a 16 year old. This was also one of the findings in a case reported in Italy in 2002 by Patacchiola et al for a 64-year-old patient who had been in menopause for the past 11 years or so. A similar finding was reported in 2004 in Japane Lyomishina Hospital by Hashida et al in an 84-year-old woman. In our study, two cases were clinically diagnosed as cancer of the cervix in 35 and 45 years old women and one case was diagnosed as cancer of the ovary. The number of cases received in the department of pathology showed a fluctuating pattern in which the year 1976 had the highest cases. The years 1979 and 1984 had the lowest cases and 1980 had no cases at all probably due to decline in histopathology services because of political instability during these periods.
Conclusion
This study has clearly shown that female genital tuberculosis generally occurs among women in Uganda as indicated by the health centers that sent the biopsies.

Although the prevalence of female genital tuberculosis was relatively low twenty years ago, the cases of genital tuberculosis may be higher today because there is increased prevalence of tuberculosis in the country. Therefore, there is a need to carry out further studies in this area.

References
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