PREGNANCY FOLLOWING CERVICAL TUBERCULOSIS

Seema Bhattacharjee[1] Rokeya Begum[2]

Summary

Incidence of urogenital tuberculosis is a raising concern worldwide specially in developing countries, in most cases, primary foci may not be identified either due to ignorance of the individual or her family may remain unaware about the seriousness or consequences.

In this case a multiparous reproductive aged woman presented with repeated episode of post coital bleeding. Most of the attending Physician confused with hormonal disturbance and treated with hormone and others for months in outreach area. Once upon a time however she was referred to Gynae OPD and after inspection of cervix she was advised for inpatient admission for Examination Under Anaesthesia (EUA) and biopsy. Histopathology report revealed chronic granulomatous lesion of the cervix and ultimately she was diagnosed as a case of tubercular ulcer of the cervix. After successful treatment by antitubercular medication as per schedule, she was conceived and gave birth to a healthy term baby. Pregnancy following cervical Tuberculosis (TB) is a rare incidence and probably not reported in literature.

Key words

Cervix; Pregnancy; Mycobacterium Tuberculosis.

Introduction

World wide incidence of Tuberculosis is a raising concern especially emergence of multi drug resistance and extreme drug resistance, so it is a global problem. TB is considered the most important communicable disease in the world; so it is considered as a major health problem in many developing countries and in some areas Genital TB is responsible for a significant proportion of female infertility [1]. In third world countries 50% of population are affected by TB [2,3].

1. Assistant Professor of Obstetrics & Gynaecology
University of Science and Technology Chittagong (USTC) Chittagong
2. Professor of Obstetrics & Gynaecology
Chittagong Medical College, Chittagong

Correspondence: Dr. Seema Bhattacharjee
Email: docseema65@gmail.com
Cell:01817731589

Nearly one third of global population i.e, over two billion people is infected with mycobacterium TB and at risk of developing the disease. It ranks second leading cause of death from an infectious disease world wide after Human Immunodeficiency Virus (HIV). Global estimation of 8.6 million new TB cases occurred in 2012 and about 1.3 million people died of TB including 0.32millon HIV associated TB death [4].

In 1993, WHO recommended DOTs (Directly Observed Treatment) as a standard strategy for control of the tubercular disease [5].

Though the underlying aetiology is different in developed and developing countries, such as in low resource set up anddrug abuse are an emerging problem for a great population where they are neglected, ignored by themselves, family or social exploitation [6].

In developed countries like USA, increase incidence of TB mainly due to association of Acquired Immune Deficiency Syndrome (AIDS) and immigration from different countries especially from Asia and Africa, where immunosuppression and malnutrition are major concern along with other disturbance [7].

In extrapulmonary TB, genital TB is (5-24)%, affection of cervix is (0.1 -0.65)% i.e, mycobacterium infection is a rare incidence, probably due to anatomical peculiarity i.e, stratified squamous epithelium of ecto-cervix is not suitable for bacterial penetration and cervical mucus having antibacterial property [8].

Fifty percent of women are symptomless, some cases present abnormal uterine or vaginal bleeding, menstrual abnormality, occasional low backache, vague abdominal pain, constitutional upset like low grade fever or weight loss etc.Tuberculosis of cervix can present with various ways and many at times mimics malignancy [9].

Different diagnostic modules are available, different organization e.g. Non Government Organisation (NGO) and Government Organisation Body (GOB) are working at various level to improve outcome and offering national guidelines.

Case Report

Mrs 'X', 32 years, para-2 Spontaneous Vaginal Delivery (SVD) Last child birth 6 years with family history of TB. Regarding her menstrual history she was a regularly menstruating woman with regular cycle and average flow. She had no history of contraception following her last child birth.

She attended to different physician and health personnel in an out reach area with the complaints of occasional weight loss, weakness, contact bleeding following coitus. She was visited by local doctors and health personnel with available medication including hormonal one within her resource capacity.

When repeated attempts of medication failed to cure episodic bleeding then some how she has referred to Gynae OPD where cervix was examined and ulcerative growth was evident that bleeds on touch. She was advised for in patient admission with the suspicion of malignancy. After admission, Examination Under Anaesthesia (EUA) and biopsy was done. Histopathology report revealed chronic granulomatous inflammation with no evidence of malignancy. Ultimately she was reassured after exclusion of malignancy and diagnosed as a case of chronic cervicitis due to tuberculosis. After counseling and multidisciplinary approach she was decided for antitubercular chemotherapy as per schedule. Category 1 : Treatment duration for 6 months. 1st, 2 months during initial phase : 4 FDC's (Fixed Dose Combinations) Isoniazid 75 mg + Rifampicin 150mg + Pyrazinamide 400mg + Ethambutol 275mg. Next 4 months during continution phase: 2 FDC's (Fixed Dose Combination) Isoniazid 75mg + Rifampicin 150mg. After one year of completion of anti tubercular medication she became pregnant and spontaneously delivered a healthy baby. Both the mother and baby were remain well.

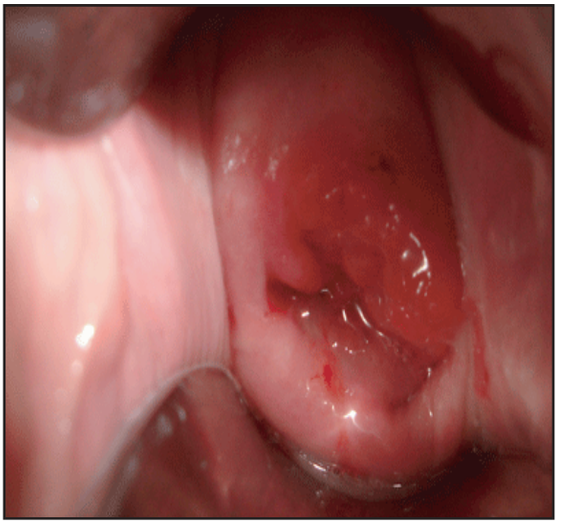

Fig 1 : Showing tubercular ulcer of cervix

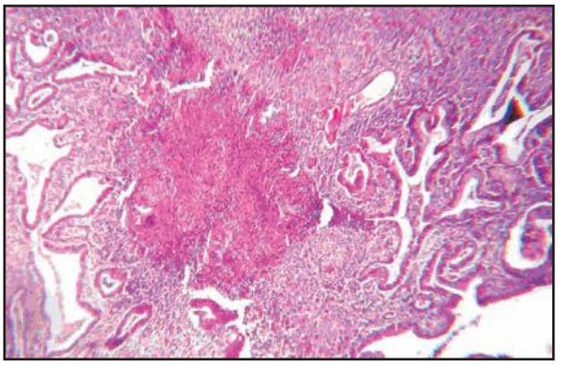

Fig 2 : Histopathology of Cervical tuberculosis

Discussion

Urogenital TB may be contagious in origin, sometimes due to transmission from the partner, though extra pulmonary TB may be spread by haematogenous or lymphatic route. Sometimes nature of spread may be difficult to predict due to variable symptomatology as disease masquerade with other Gynae condition like abnormal uterine bleeding or malignancy. Sometimes may remain asymptomatic [10]. Genital TB mainly affect reproductive aged women [11].

Cervix is also an important site that undergo hormonal and cytological change. Screening procedures are available and applicable. Vaccine prophylaxis are also obtainable and purchasable.

As exposure of the cervix is easy due to anatomical peculiarity and involvement by various microorganisms, e.g. bacteria, viruses, protozoa that expose cervix to serious chronic disorder including inflammatory, sexually transmitted infection and ulceration etc. Sexual behavior is also responsible for various pathology. Cervix is also a common site for obstetrical injury during child birth. Chance of involvement by TB is (5-25)% [12].

In the advanced era of antimicrobial chemotherapy including mass media communication though they may not be amenable to low resource population due to varied reasons like socio-cultural, familial, financial or educational bar. Ignorance and communication is also a big bar for their actual cure. These are also responsible for emergence of newer burden for development of Multi Drug Resistant (MDR) TB which is a global problem [13].

Though once upon a time pulmonary TB and some form of extra pulmonary TB were responsible for serious life threatening condition including death, now a days i.e, beyond century the condition have changed or sometimes remain in the guise of other pathology to the clinician [14].

In a huge number of poor population where malnutrition hygiene, overcrowding and sexual behavior are still great concern, they are ignored by themselves, laws or other family members.

GOB, NGO, World Health Organisation (WHO), Millennium Development Goal (MDG-6) are ongoing but still this granulomatous disease is a major health problem both in terms of infectious morbidity and mortality, especially in thirteen countries accounting for nearly 75% of all cases on a global scale.

Directly Observed Treatment (DOTs) are ongoing and available, mass population are trying for motivation and acceptance.

Diagnostic facilities are increasing and improving including their specificity and sensitivity.

Genital TB, especially cervical TB may be unrecognized as it may masquerade with other gynae conditions like abnormal uterine bleeding or malignancy. To establish diagnosis high index of suspicion, multiplex Polymerase Chain Reaction (PCR) are useful diagnostic tool for early detection, to initiate therapy and to prevent organ dysfunction [15].

Identification and referral of these population is also critical. Mostly they are visited and treated by general physicians and sometimes hormonal and non hormonal protocol of abnormal uterine bleeding in outreach area.

It is also necessary to exclude different form of abnormal uterine bleeding in non gravid women of reproductive aged. Nowdays International Federation of Gynaecology & Obstetrics (FIGO) has classified abnormal uterine bleeding as [16].

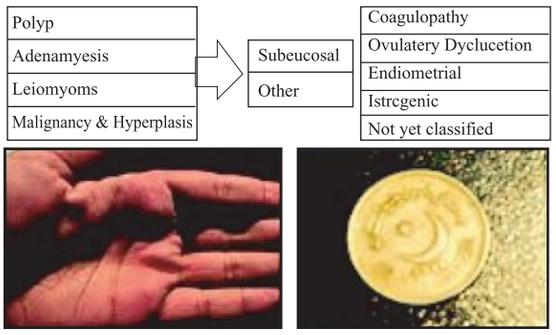

Fig 3 : Palm coein classification

When repeated treatment options failed to cure actual or specific pathology however they were referred to Gynae OPD in a tertiary centre. After evaluation they were advised for inpatient admission with the suspicion of malignancy as cervix shows ulcerative growth. She was included in submucosal and other group. Thereafter EUA and biopsy was done where histopathology revealed tubercular ulcer of the cervix and malignancy was excluded. After that she was decided for initiation of anti tubercular chemotherapy and cured.

After delivery, she attended to Gynae OPD for contraception. She was counseled with all available method and helped to decide the method suitable for her. She agreed to take Oral Contraceptive Pills (OCP) as Intrauterine Contraceptive Device (IUCD) was contraindicated [17]. Barrier method was also safe. Safety of permanent method was not studied as these are accepted rarely nowadays as because of availability of long term contraception.

Recently we should have to think how we can reduce or break this vicious cycle of diagnosis, referral, treatment schedule and follow up to reduce burden of the disorder, to prevent emergence of multi drug resistance and extended drug resistance tuberculosis. How to improve and increase awareness are also burning issues both in developing countries and world wide.

It is also reported that genital TB affects 12% of patient with pulmonary TB [18].

Now days, there is increasing incidence of AIDS and its consequences in developed countries which is responsible for increase TB in their set up [19]. HIV is important dynamics for alteration of co-infection with TB in England and Wales. In African countries (60-90)% HIV positive are infected with extrapulmonary TB [20].

Genital Tuberculosis is more preponderance in female than male probably due to physiology of menstruation, growth spurt at puberty and mostly diagnosed during infertility work up.

To fulfill vision statement of the National TB Control Programme i.e,to strengthen TB control efforts through establishing effective partnership, mobilizing resources, ensuring quality diagnostic and treatment devices under the DOTs strategy. It strives to make services equally available to all people in Bangladesh irrespective of age, sex, religion, ethnicity, social status or race.

Management options include usually multidrug therapy by INH, Rifampicin, Ethambutol, Pyrazinamide and to avoid unnecessary surgical interference.

Surgical Intervention require for other Genital TB occasionally; usually in case of obstructive features i.e, mass or lump not responding to conservative approaches [21].

Conclusion

Any form of contract bleeding during reproductive period specially in endemic areas of TB in developing countries should be considered for genital TB. To reach MDG-6 i.e. set for 2015 & then eliminate TB by 2050, as transmission of TB is a recognised risk in health care fascilities & communities specially in resource limited settings where transmission may be fascilitated by inadequate TB infection control measures. Care providers empower people ē TB & communities through partnership to a major public health problem in Bangladesh as WHO declared TB as a global emergency. To promote early diagnosis, prevent spread, complication & to protect health of our population every measures should be taken, as Bangladesh ranks sixth among the (Twenty two) 22 high TB burden countries.

Disclosure

All the authors declared no competing interest.

References

1. Marana R, Muzii L, Lucisano A, et al: Incidence of genital tuberculosis in infertile patients submitted to diagnostic laparoscopy: Recent experience in an Italian University Hospital. Int J Fertil. 1991;36: 104 .

2. Ellner JJ: Tuberculosis. In : Kelley A, editors. Textbook of Internal Medicine., Philadelphia, JB Lipincott. 1989;1569.

3. Dhillon SS, Gosewehr JA, Julian TM, et al:Genital Tuberculosis: Case report and literature review. WMJ. 1990 ; 89:14.

4. Nationl guide lines and operational manual for Tuberculosis control. Dhaka WHO. 2013;5:1-5.

5. Murtaza B, Saeed S, Khan A N, Malik B I, Mahmood A, Sharif A M et al. Case report: Retroperitoneal Masses:Different Clinical Scenarios. J Ayub Med Coll. 2008; 20:161-164.

6. Muir DG, Belsey MA : Pelvic inflammatory disease and its consequences in the developing world .Am J Obstet Gynecol. 1980; 138:913.

7. Giannacopoulos KC, Hatzidaki GE, Papanicolau NC, R elakis KJ, Kokori HG , Giannacopoulou CC. Genital tuberculosis in a HIV infected woman: a case report. Eur J Obstet Gynaecol Reprod Biol. 1998;80:227-229.

8. Joshi PS, Vijoy shanker S ,Sinha P. An unusal case of cervical tuberculosis.On line J health Allied. 2011;10(1) : 21.

9. Chowdhury NN. Overview of tuberculosis of the female genital tract. J Indian Med Assoc. 1996; 94: 345-346.

10. Lamba H, Bryna M, Goldin R,Jeskin C Tuberculosis of cervix: Case Presentation and a review of the literature .Sex Transm. Infect 2002; 78: 62-63. SA Ahmed, AO Oguntay, K Odogwu ad K Abdullahi. Tuberculosis Cervicitis: A case report. Niger Med J. 2011;52(1):64-65.

11. Richards MJ, Angus D. Possible sexual transmission of genitourinary tuberculosis. Int J Tuberc Lung Dis. 1998;2:439.

12. Lattimer JK , Colmor HP, Sanger G et al. Transmission of genital tuberculosis in women .Acta Obstet Gynecol Scand. 1950; 31: 170.

13. Djuretic T, Herbert J, Drobiniewski F, Yates M, Smith EG, Magree JG, et al. Antibiotic resistant tuberculosis in the United Kingdom:1993-199. Thorax. 2002;57:477-482.

14. Jedberg H : A study on genital tuberculosis in women .Acta Obstet Gynecol Scand. 1950; 31:170.

15. Himanshu R ,Shanti R, Shaerika R, Use of PCR for the diagnosis of endometrial tuberculosis in high risk subfertile women in an endemic zone : J Obstet Gynecol India.2003; 53:260-263.

16. The FIGO Classification of AUB: Munro MG (Department of Obstetrics and Gynaecology, David Geffen School of Medicine at UCLA and Kaiser Permanente, Los Angeles Medical Center, Los Angeles, California 90027, USA), Critchley HO, Fraser IS; FIGO Menstrual Disorders Working Group.

17. Camera ST, Glasier A. Contraception and Sterilization. Edmons Dk, editors.Dewhurst,s Textbook of Obstetrics and Gynaecology 8th ed. West Sussex:Welly Blackwell. 2012; 506.

18. Aka N, Vural TZE, Evaluation of patients with active pulmonary tuberculosis for genital involvement. J Obstet Gynaecol Res. 1997; 23: 337-340.

19. Health Protection Agency. Preliminary Annual Report on tuberculosis reported in 2002 in England in England, Wales and Northern Ireland London: HPA; 2004(www.hpa.org.uk/infections).

20. Rose AMC, Sinka K, Watson JM, Mortimer JY, Carlett A. An estate of the contribution of HIV infection to recent rise in tuberculosis in England and Wales. Thorax. 2002;57:442-445.

21. Sutherland AM. Surgical treatment of tuberculosis of the female genital tract. Br J Obstet Gynecol. 1980; 87: 610-612.