Case Report

Tuberculous Salpingitis - possible cause of salpingo-enteric fistula

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A B S T R A C T

Salpingo-enteric fistula is a rare disease causing infertility. It occurs when there is a connection between fallopian tube and the intestine. It can be accurately diagnosed with hysterosalpingography. Fistulas mostly occur as a consequence of obstetric complications, however, inflammatory bowel disease, pelvic malignancy, pelvic radiation therapy, iatrogenic causes, and trauma are other potential causes. The possibility of tuberculous salpingitis as a possible cause of salpingo-enteric fistula should always be considered in the developing countries where tuberculosis is endemic.

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Introduction

Communication between the gastrointestinal tract and female adnexal viscera is infrequently seen. Very few cases have been reported in the literature about tubo-enteric fistulas \cite{1}. Considering the proximity of the uterus to surrounding adnexal structures, there is likelihood of formation of various types of fistulas secondary to underlying pelvic disease, radiation therapy or prior intervention \cite{2}.

Enterotubal fistula may occur as a sequela of tuberculosis, pelvic inflammatory disease, diverticulitis, Crohn’s disease, appendicitis, endometriosis, post lower segment caesarean section or after surgery for tuberculosis \cite{3}. Clinical complaints range from being asymptomatic to having amenorrhea, cyclic hematuria, passage of urine or feces through vaginal tract, perineal dermatitis, foul smelling air, or discharge through unknown orifices \cite{4}. The optimal management for this condition is surgical \cite{3}.

Case report

Twenty-nine-year-old married female underwent a hysterosalpingogram for infertility workup. She had history of...
pulmonary tuberculosis 8 years back which was treated completely. Her menstrual history was unremarkable. There was no history of pelvic inflammatory disease or previous surgical intervention.

Patient presented for hysterosalpingogram on 9th day of her menstrual cycle. Water soluble contrast medium was injected into the uterine cavity under aseptic technique through Leech Wilkinson’s cannula. Uterine cavity was outlined with contrast medium and it appeared normal in shape and size. Irregularity and beaded appearance with multiple outpouchings was noted in both fallopian tubes representing salpingitis isthmica nodosa (Fig. 1). Contrast from the left fallopian tube was seen outlining lumen of small bowel. Further accumulation of contrast was seen within the bowel on delayed images (Fig. 2). No free intraperitoneal spillage of contrast was seen from left fallopian tube. Right fallopian tube was blocked at its fimbrial end with no intraperitoneal spillage of contrast. The diagnosis of salpingo-enteric fistula was made.

The treatment options of surgical open laparotomy versus laparoscopic approach for repair of fistula and salpingoplasty were discussed with the patient. The patient opted for and underwent laparoscopy. The procedure was successful, and patient remained stable. She has been followed up for 1 year post treatment and has not been able to conceive yet.

Discussion

Genital tuberculosis (TB) is a very common risk factor for infertility in women. Its occurrence is often overlooked as it is mostly asymptomatic and challenging to diagnose [5]. The incidence of pulmonary TB still occupies first position followed by genital TB. Recent statistics have showed an incidence of genital TB as 1% in developed countries, whereas figures as high as 10% in developing world where tuberculosis is more common [6]. Genital tuberculosis mostly occurs secondary to pulmonary tuberculosis which either spreads directly (intra-abdominal or peritoneal foci) or indirectly (through blood or lymph) [7].

One of the complications of genital TB is formation of fistulous communications between the fallopian tube and rectum, sigmoid, appendix, caecum and ileum [4]. Salpingo-enteric fistula is rarely encountered and has been claimed to occur secondary to obliteration of tubal lumen by inflammatory material resulting in fistulous tracts to open at other sites. The most common complaint is lower abdominal pain with others including passage of flatus per vagina, sepsis, and diarrhea. Although large number of women are asymptomatic and it is found incidentally during investigation for infertility [3].

Most of the cases are diagnosed on hysterosalpingography while other cases detected during laparotomy or barium
enema examination. Typical hysterosalpingography findings include tubal luminal dilatation, architectural distortion and its abnormal pelvic location along with visualization of contrast outlining the bowel mucosa and then its further transit into distal bowel loops on subsequent films. Contrast enema examination on the other hand is less sensitive considering the small lumen of the fistula and failure to generate an adequate pressure between the colon and Fallopian tube prevents contrast filling the tract [3].

The treatment is predominantly surgical which includes closure of fistula with salpingectomy [2] with only one case in literature reported with spontaneous closure [3].

The possibility of tuberculous salpingitis as a possible cause of salpingo-enteric fistula should always be kept in mind when this sort of hysterosalpingography findings appear because of increasing number of tuberculosis cases in developing countries where tuberculosis is endemic.

### Patient consent

Written informed consent from the patient for publication has been obtained.

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