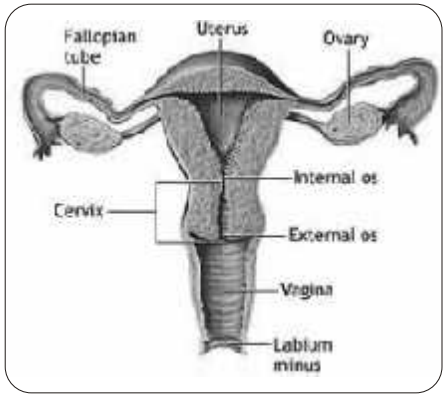
FERTILITY REVIEW



THE SURGICAL COURSE TO CONCEPTION (1): Blocked Fallopian Tubes

This article is intended to enlighten the public on the subject of infertility, infant and maternal health. It is therefore regarded as part of our institution's Corporate Social Responsibility on reproductive health and assisted conception. Characters used here are non-existent and the stories highlighted are hypothetical and only aimed at simplifying the medical discourse.

CASE STUDY

Jane Doe (32) - an adherent of natural conception, has sadly always anticipated she would miss her next menstrual period for the past four years of her marriage. She recently consulted with her Gynaecologist when she noticed an unusual vaginal discharge way past her last menstrual period and a slight pain in her lower abdominal region.

REVIEW

In layman terms, the fallopian tubes are a pair of conducting pipes arising from the uterus and opening into the pelvic cavity. They are a few millimeters away from both ovaries and are each flanked at both ends with the fimbrae - which are brush-like structures that sweep in the released egg (during ovulation) from the ovaries down to the fallopian tubes. Sperms swim through the opening of the cervix to the uterus and up to the tubes. Fertilisation usually occurs in the distal end of the tube, the fetilised egg (embryo) then makes its slow journey to the uterine cavity with implantation occurring about 5 to 6 days later.

However when the tubes are diseased, as a result of a physiological anomaly or an infection, the resultant effect could be a partially or an entirely blocked fallopian tube that prevents the sperms from reaching the eggs. Research shows that blocked fallopian tubes or tubal factor infertility is the cause of infertility in up to 40% of infertile women. A partially blocked fallopian tube increases the chance of ectopic pregnancy - which if untreated could cause a rupture of the tube and haemorrhage (internal bleeding) that could lead to death. A totally blocked tube could also result in a mass where the tube dilates and its internal diameter increases and fills up with fluid - preventing fertilization or impairing implantation. A fallopian tube with significant obstructive large mass is referred to as a Hydrosalpinx. While most incidences of tubal blockage are quite asymptomatic and barely noticeable, a hydrosalpinx may cause lower abdominal pains and an unusual vaginal discharge - like the hypothetical Jane Doe case presented.

There could be several factors responsible for tubal blockage, but significantly prevalent amongst them are:

1. Sexually Transmitted Diseases (STD) - mostly Chlamydia and Gonorrhea infections

2. Pelvic Inflammatory Disease - which could also arise from STDs

3. Previous Ectopic Pregnancy - tubal pregnancy that may have ruptured or left scar tissues)

A definite diagnosis of tubal blockage is commonly established with a specialised X-ray/dye-test called Hysterosalpingogram (HSG) - where a special dye is injected through the cervix to leave a traceable course through to the opening of the fallopian tubes into the pelvic cavity. Another procedure for evaluating tubal patency is by laparoscopy and chromotubation - where a dye such as indigo carmine is injected through the cervix while its exit through the fallopian tubes is viewed via the laparoscope. Surgery to repair a blocked tube is no longer commonly performed because of its potential predisposition to ectopic pregnancy in the future. An alternative fertility treatment in In-vitro Fertilization (IVF) - where the tubes are bypassed, is however a safer and more efficient route to achieving conception.

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SURGICAL AID & TREATMENT

Jane's evaluation showed that she did not have an STD or Pelvic Inflammatory Disease. An HSG showed that she had blocked tubes with hydrosalpinges. Studies have however shown that the fluid in a hydrosalpinx may be embryotoxic and could impair implantation of a fertilized egg (embryo) in about 20 to 30 % of IVF patients. She therefore agreed to further evaluation by Laparoscopy; and while tubal blockage was indeed confirmed, surgery was conducted (as initially consented to) - to remove the diseased tubes in preparation for an alternative fertility treatment in IVF (In-Vitro Fertilisation) - where her fallopian tubes would be bypassed and eggs are harvested directly from her ovaries - to be fertilised with her husband's sperm outside the body.

Jane, with her husband's encouragement and psychological support sailed through the IVF (In-Vitro Fertilisation) treatment - which culminated in the transfer of two embryos attaining the blastocyst stage. She was glad when her pregnancy test came back positive about two (2) weeks later. She later carried the pregnancy to term and was extremely overjoyed when she finally put to bed.

To be continued

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