Hysteroscopic catheterization of fallopian tube in proximal tubal block

THESIS

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TO THE SOUL OF

MY FATHER

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PREFACE

PREFACE

Tubal factor is responsible for 25 - 30 % of cases of female infertility (1-5) and proximal tubal obstruction (PTO) is observed in 10-25 % of these cases (3-5-6-7).

The evidence of non-true anatomical obstruction, the lack of histologic confirmation and the presence of tubal cast or plug (5-10) created a scope for non operative access to recanalize proximally obstructed fallopian tube.

Platia, and Krudy, in 1985 (11) succeeded to recanalize a proximally obstructed fallopian tube with a resulting pregnancy. This created a wide spread interest in tubal cannulation and followed by several larger studies confirming the efficacy of cannulation. The low incidence of failure in experienced hands, the lack of complications and low cost, justifies the use of this technique to investigate and manage PTO. The hysteroscope with its wide visual dimensions, provides a very good access to the tubal ostia.

The adaptation of this endoscopic technology and improvement in catheter design, added to its low price and simplicity will offer tubal cannulation as a valuable aid for the contemporary physician.

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AIM OF THE WORK

The aim of this work is the evaluation and confirmation of the role of trans-hysteroscopic cannulation of fallopian tube in accurate management of PTO as a less invasive and more cost effective modality trying suitable catheters to negotiate the fallopian tube.

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REVIEW OF LITERATURE

HISTORY

The first accurate description of the oviduct was provided by; Gabriele Fallopio (12) in his (Observation Anatomical) in 1561; "This seminal oviduct originates from the cornua uteri, it is thin, very narrow, of white colour, and looks like a nerve. After a short distance it begins to broaden and to coil like a tendril winding its folds almost up to the end, there, having becoming very broad. It shows an extremities of the nature of skin and colour of flesh, the utmost end being very ragged and crushed like the fringe of worn out clothes. Further, it has a great hole which is held closed by the fimbriae which lap over each other"...

In 1621 Fabricius (12) described the secretory activity of the "upper part of the uterus" in the formation of avian egg, a function which was suggested much later for the mammalian oviduct by Blundell in 1819, while Dionis in 1724, pointed out the importance of tubal motility, he also provided an accurate description of tubal pregnancy.

The movement of the cilia was first recognized by Purkinje and Valentin in 1834 and explained the transport of conceptus which previously had been attributed to peristalsis of the tube. (all cited by Bodemer (1968) (12).

Interest in tubal disease developed during the second half of the ninteenth century when the first reports on tubal tumours appeared and genital tuberculosis was described. N. Gonorrhoea was discovered and its association with salpingitis and infertility was established. At the same time, the first operation for rupturred tubal pregnancy and for other tubal pathology were reported (13).

The begining of this century was marked by the development of diagnostic procedures for tubal pathology with the introduction of hysterosalpingiography, tubal insufflation and laparoscopy.

During the last decade, the development and increasing use of the diagnostic and operative endoscopy encouraged more diagnostic and therapeutic accuracy of tubal diseases. IVF has provided hope to patients with tubal permanent damage.

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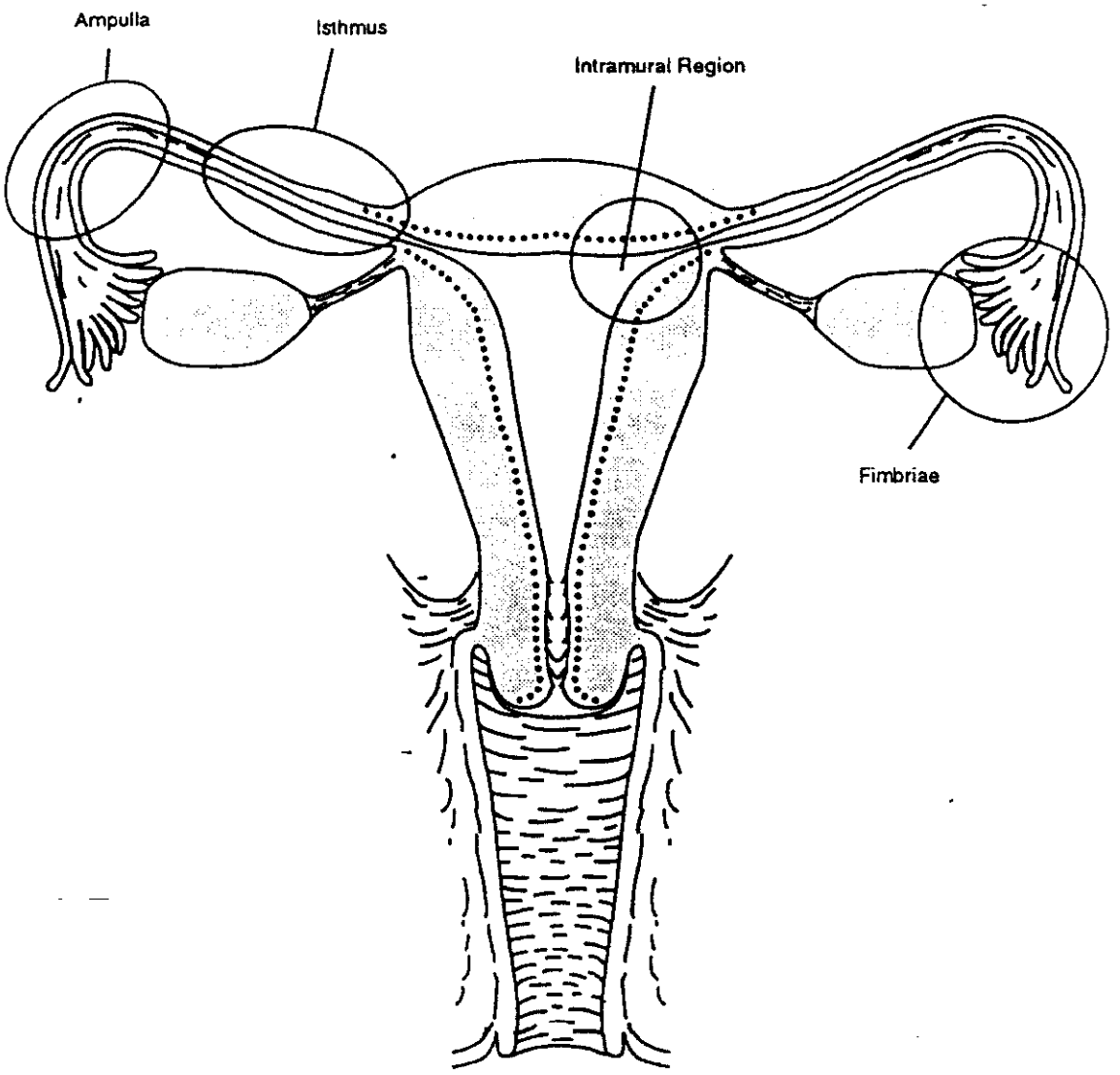
FALLOPIAN TUBE ANATOMY

The fallopian tube (F.T) is a bilateral fibromuscular cylinder lined by epithelium. Embryologically derived from the paired upper portions of the paramesonephric ducts whose lower portions fuse to form the uterus. It is confluent proximally with the endometrial cavity and distally with the peritoneal cavity. By sagging into the peritoneal cavity, it becomes surrounded by a double fold of peritoneum which gives rise to the mesosalpinx, the primary supporting mesentry of the tube (14). Between the leaves of the mesosalpinx varying amount of connective tissue are deposited, the amount increasing toward the uterus and decreasing toward the ovarian end of the tube.

Through this connective tissue the vasculor, nervous and lymphatic systems pass from their retroperitoneal origins into the tube.

The fallopian tube, therefore, consists of an outer serous coat applied to a layer of loose areolar connective tissue within which is embedded the tubular myosalpinx with its inner epithelial layer, the endosalpinx, which lines the tubal lumen.

The tube averges 10-12 cm. in length with four anatomical segments can be distinguished (13): the interstial segment, the isthmus, the apmulla and the fimbria. Fig(0).



ANATOMY OF THE FALLOPIAN TUBES

Figure (0)