

# FALLOPIAN TUBE PATENCY BY ULTRASOUND SCAN

(A New Technique)

By

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## SUMMARY

Conventional hystero-salpingogram is being done for establishment of tubal patency at present. A new technique using Ultrasound which has not been described in the world literature to the best of one knowledge, was tried and it has proved its superiority over the conventional method.

### *Material and Method*

Thirty cases which were reported as bilateral tubal block on hystero-salpingogram were taken into study between their 6th to 10th day after L.M.P.

All the cases underwent U.S. tubal patency test. The method adopted was as follows:

- (1) A normal routine gynec scan was done.
- (2) Cases which had fluid in the pouch of Douglas were not taken into study.
- (3) Then folleys balloon catheter was introduced into the Uterine cavity and the balloon was distended with 2 cc of normal saline, and pulled back to occlude the internal Os.
- (4) Then 40-50 ml of normal saline was injected into the uterine cavity and the collection in the pouch of Douglas observed.
- (5) Cases in which the tubes were patent had shown the collection of fluid in

the pouch of Douglas. The cases in which the tubes were blocked showed distension of the uterine cavity and the size of the uterus also increased minimally.

- (6) The balloon was deflated and the catheter pulled out.

### *Discussion*

Thirty cases were scanned over a period of 8 months by ultrasound after ascertaining the bilateral block on the conventional hystero-salpingogram. Their infertility period ranged from 4 years to 10 years of married life. Their previous history revealed that 8 cases had underwent voluntary abortion in their first pregnancy in the early first trimester.

It is known that some of the cases of tubal block on hystero-salpingogram are due to tubal spasm, even on delayed films, as the contrast used is an irritant to the mucus membrane.

Hence a non-irritant fluid which also serves the purpose of contrast on ultrasound scan was used.

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When the fluid was injected into the uterine cavity the flow of fluid into the pouch of Douglas was seen as small hyperechoic densities moving irregularly below the lower segment, like a sediment which is disturbed in a tube which has been centrifuged.

In cases where there was no collection of fluid seen in the pouch of Douglas the uterine cavity was seen to increase in size and the uterus was also increased minimally. The patient complained of lower abdominal pain during the procedure which subsided with the removal of the catheter.

Thus 30 cases which were reported as bilateral tubal block on hystero-salpingogram were studied and 24 i.e. 80% of them were found to be patent by this technique—an indication of its superiority over hystero-salpingogram. Only 6

cases showed the signs of bilateral tubal block on ultrasound test.

There was no untoward side effect after this procedure was done and in fact three of the cases have already conceived.

Now the question arises whether this test can indicate the side of the patent tube? As at present the free flow of the fluid from the fimbrial end of the tubes was seen in only one of the cases in which the right para uterine structures was pulled up on to the supero-lateral surface of the uterus due to a previous surgical intervention (appendectomy) 4 years back—due to adhesions.

Moreover the side of patent tube does not matter much as the ovum is known to be released alternately from each side.

Hence this goes to prove that this new technique is superior to hystero-salpingogram in its technical, and economical aspects and the ease of its performance.