

compared with normal tissue.

The results of the study shows the usefulness of this method for the diagnosis of uterine cancer. The advantage of CASRAD probe over G-M counter in this study is its smallness (2.7 mm in diameter) which enables

to know the spread of the cancer infiltration by scanning on the uterus. An instrument combined CASRAD probe and Cusco's speculum was reported in order to get better and longer placement of the detector on a region of the uterus.

Radiotubation

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Lots of methods for diagnosing the patency of fallopian tubes have been put into practice in fertility studies. However, it may be said that it is difficult to exactly diagnose the patency by each conventional method. Consequently on research for these causes, kymographic hysterosalpingography and radiotubation were tried simultaneously for the purpose of diagnosis of both morphological and functional conditions of fallopian tubes.

Namely, after the infusion of aqueous contrast medium (10 ml of 80% Angioconray) containing ^{32}P ($5 \mu\text{Ci}/\text{kg}$ weight) into uterine cavity, x-ray pictures were taken, and then 1 ml of venous blood was obtained from the cutaneous vein of elbow for the periods of 10, 20, 30, 60, and 120 min. respectively after the infusion. Thus, the counts of radioactivity of the venous blood were measured by GM counter after spontaneous drying for 24 hours. X-ray pictures were compared with the counts of radioactivity and some findings were obtained as follows:

1. In patent cases of both tubes on x-ray picture, the counts of radioactivity are inclined to gradually increase as time passes and continue the high value for the period of over 120 min.

2. In non-patent cases of both tubes, the counts of radioactivity show the lower value than in patent cases and are permitted to reach the maximum value in the period of 10 to 20 min. and decrease gradually with time. However, in the cases with angiogram, the counts of radioactivity reach in high value in 10 min. Furthermore, in the cases with hydrotubation, they increase with time as patent cases of both tubes.

3. In the patent cases of one side tube, no regular tendency of the counts of radioactivity of venous blood was found.

4. In the non-patent cases of both tubes, the counts of radioactivity of venous blood of the cases with tuberculous disease in history were a little higher than those of the cases with non-tuberculous infectious disease of abdominal cavity, or without any infectious disease in history.

In the non-patent cases, it is considered to be based on the absorption of ^{32}P through the internal surface of uterus due to intra-uterine pressure by infusion and intravenous inflow of ^{32}P , that the counts of radioactivity of venous blood show the maximum value in the period of 10 to 20 min. On the other hand, in the patent cases of both tubes, it is also considered to be based on the gradual absorption of ^{32}P through the peritoneum after the intraabdominal inflow through the tube, that the counts of radioactivity of venous blood are apt to increase in the period of more than 120 min.

The counts of radioactivity of venous blood in some patent cases of one side tube show the low value as the non-patent cases of both tubes. It may be considered as above mentioned, that wall of patent tube had become hard for the past inflammatory change of non-patent tube.

The patency of fallopian tubes may be diagnosed with contrast of each side with a newly devised radiotubation by which the patency is judged from ratemeter pattern of renogram apparatus, closely placing collimator on the abdominal wall with the infusion of ^{131}I into uterine cavity.