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IN FIBROMATA OF FEMALE GENITAL TRACT

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IN FIBROMATA OF THE FEMALE GENITAL TRACT*

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THE value of lipiodol as a diagnostic aid in gynecology has been well substantiated. In competent hands, this method of visualizing cavities of the genital tract has been proved to be an artful aid, sufficiently free from harm to be of real practical value. Its *raison d'etre* is as rational as that of the visualization of the urinary tract; the frequency of genital abnormalities in the female gives it much academic as well as practical value. Notwithstanding these facts, this aid to gynecological diagnosis has not been sufficiently used to establish mass information or reliable acumen in reading the roentgenograms; hence, any new material should be welcome. The willingness of the female patient to submit to operation and the interest of the surgeon in operation should not stand in the way of our best efforts toward exactness in preoperative gynecologic diagnosis. The following cases are illustrative:

A single woman, aged twenty-two, presented the classic picture of ectopic pregnancy; exposure, missed period with uterine bleeding three weeks later, and a doughy, rather fixed, mass in the region of the right tube. By means of lipiodol, the cavities of both tubes were visualized and shown to be normal. Because of the fact that at a previous operation the right ovary had been removed, the diagnosis of intraligamentary cyst was made and the indication for operation was changed from an emergency to that of one of election. Later, the diagnosis of intraligamentary cyst was proved at operation.

In another case, that of a young girl of fifteen, who had had an amenorrhea of five months and a mass in the lower abdomen, just the shape and size of a five months' pregnancy, lipiodol proved extremely useful. This patient's mother had been told by the interne that her daughter was pregnant. I saw this patient the following day and on bimanual examination made out a small mass in the right side of the pelvis, which seemed to have been pushed up near the symphysis by the larger mass. I felt that this might be the infantile uterus. The patient absolutely denied the possibility of pregnancy, no fetal heart could be heard and no fetus could be palpated. The cervix was small and showed no signs of pregnancy. The uterus was then very carefully sounded and found to be of less than normal depth. Lipiodol was then injected and the skiagram showed the uterus to be infantile, both tubes filling normally, and the uterus pushed considerably to the right side. The temperature record, the white blood cell count, and the sedimentation test pointed toward abscess, and this diagnosis was made and proved at operation.[1]

Two applications of this method of diagnosis seem to be missing from the literature; the one, of visualizing fibromata in the vagina, uterus and pelvis, and the other, of the prognostic value of this method in subacute and chronic salpingitis. Out of a mass of material collected from the injection of 150 patients under my supervision,[2] I submit 6 cases of fibromata of the female genital tract visualized by lipiodol and the roentgen ray. The question of the use of lipiodol as a prognostic aid in salpingitis will be discussed in a subsequent paper.

CASE REPORTS AND DISCUSSION OF ILLUSTRATIONS

CASE 1 (Fig. 1). This patient, aged nineteen, came to the hospital in October, 1927, with a condition in which differentiation between appendicitis and right salpingitis was difficult.

[1] This patient was from the service of and was operated upon by Dr. Raymond Watkins.

[2] Some of this material has been reported in *Northwest Med.*, 27: 222, 1928.

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This skiagram, taken after the injection of lipiodol, showed a normal uterine cavity (there is a defect on the right side, due no doubt, to

FIG. 1. Skiagram of Case I, shown, primarily, as one of normal uterine cavity and tubes to be used as contrast in the plates that follow.

the cannula) and normal tubes. A constriction in the tubouterine junction on each side was

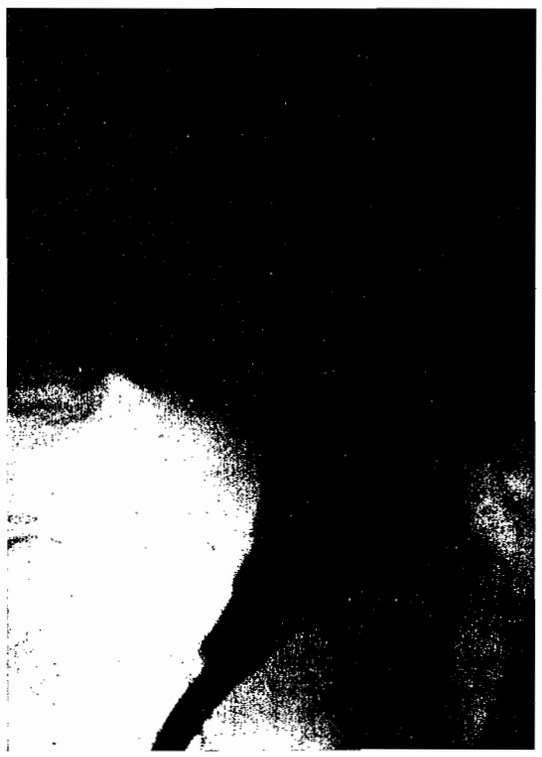

FIG. 3A. Case III. Skiagram showing elongated uterine cavity and large crescent-shaped filling defect. Uterine fibroid.

also seen. (This has been described by Rubin as caused by sphincteric action). The patient was operated on the same day, with a diagnosis of subacute appendicitis, disease of the right tube having been eliminated by the roentgen ray. The appendix was found considerably

FIG. 2. Case II. Skiagram showing tumor with pedicle.

swollen and inflamed. She made an uneventful recovery, became pregnant in three months, and within a year after the injection of lipiodol I delivered her of a normal living baby, weigh-

FIG. 3B. Case III. Photograph of the specimen after a supravaginal hysterectomy, showing the uterine cavity and the large fibromyoma, cut into.

ing 3395 gm. This case suggested that the use of lipiodol in the tubes does not jeopardize the chance of future pregnancy.

Here, then, is a case in which injection of lipiodol was an aid in the differential diagnosis between right salpingitis and acute appendicitis; in which a constriction, probably

sphincteric, is shown in both tubouterine junctions and in which a pregnancy and delivery of a normal baby ensued within the year.

FIG. 4A. Case IV. Skiagram showing elongated lower uterine segment and large concave filling defect. Multiple fibroids of uterus.

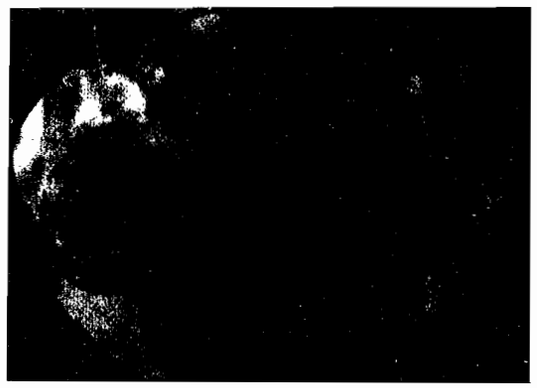

FIG. 5A. Case V. Skiagram.

CASE II (Fig. 2). This patient, aged forty-three, complained of metrorrhagia and loss of strength for two years and recently of a foul, blood-tinged leucorrhea. Examination revealed a round, hard mass filling the pelvis, as dose a baby's head. The fingers could not be passed around the tumor, and no attachment could be felt. Lipiodol was injected all around the tumor with a soft rubber catheter, and the skiagram (Fig. 2) visualized the tumor with its

FIG. 4B. Case IV. Photograph of specimen removed.

pedicle, which I presumed was attached inside the uterus.

The tumor was delivered through the vulva, as a baby's head would be, with a pair of obstetrical forceps. When the pedicle was exposed, it was clamped and the tumor was amputated. The pedicle was closed with a continuous suture of chromic catgut. The uterus

FIG. 5B. Case V. Pathological specimen. Fibromata of ovary.

was so inverted as to be almost saucer shaped. The cervical wall was about 3 cm. in thickness and the cervical opening was about 7 cm. in diameter. The eversion could not be reduced

by pressure and was apparently one of long standing. The patient made an uneventful recovery, and when seen six months after the operation, the uterus was gradually returning to normal shape, and the patient was free from bleeding and discharge. The pathological diagnosis was pedunculated submucous fibromyoma with hyaline degeneration and secondary chronic inflammation.

Fig. 6a. Case vi. Skiagram.

Fig. 7a. Case vii. Skiagram.

Case iii (Figs. 3a and b). This patient, aged forty-eight, complained of uterine bleeding, a feeling of weight in the pelvis, and bearing-down sensations. The pelvic examination was negative, except for the fact that the corpus of the uterus was approximately three times the normal size, and extremely hard. The skiagram (Fig. 3a) after oil injection showed considerable elongation of the uterine cavity with a large crescent-like filling defect. Diagnosis by skiagram: uterine fibroid.

Fig. 6b. Photograph of specimen after supravaginal hysterectomy and removal of right adnexa showing pedunculated fibroid and ovarian cyst.

Case iv (Figs. 4a and b). The patient, aged fifty, complained of a tumor in the abdomen which was slow growing and gave her considerable distress because of weight. The top of the growth could be palpated at the level of the umbilicus, and because of thick abdominal fat, the exact nature of the growth could not be ascertained nor could the corpus of the uterus be exactly located. A mass about the size of a normal uterine corpus could be felt just above the cervix to the right. The skiagram (Fig. 4a), following the injection of lipiodol, shows an enormous elongation of the lower uterine segment, and a large concave filling defect on the left side of the uterine cavity. Diagnosis: multiple fibroids of the uterus.

Plate 7b. Photograph of specimen removed, showing the cyst of left ovary and pedunculated fibroid. (Note how pedunculated fibroid causes widening of lower uterine segment in skiagram, Figure 7a.)

A photograph of the specimen (Fig. 4b) after supravaginal hysterectomy, shows that the mass near the cervix which I thought might be the fundus was one of the multiple fibromyomata of the uterine corpus. The crescent-like filling defect is explained by the large fibromyomata shown in the opened specimen.

Case v (Figs. 5a and b). In this case[3] as illustrated the lipiodol appears to have been injected with more than the usual force, and is scattered rather widely in the pelvis. The tumor is clearly outlined. The oil, being warm and thin, readily accommodates itself to the outer surface of a growth on which it falls. The uterus is seen sharply antiflexed. The fimbriated end of the tube apparently lies near the top of the tumor. Diagnosis: fibromata of the ovary.

Case vi (Figs. 6a and b). This woman, aged thirty-five, complained of almost constant blood-tinged spotting with no other ill-health. Bimanual examination was negative except that the uterine corpus was larger than normal, and there was felt a mass in the right adnexa which felt like an ovarian cyst the size of a hen's egg. After injection of lipiodol, the skiagram (Fig. 6a) revealed (1) a widening of the lower segment of the uterine cavity, (2) a concave filling defect in the fundus of the uterine cavity, and (3) at the point marked "x" (the original film showed this plainly) another filling defect with the concavity upwards, of the sort one would expect to find at the lower pole of a pedunculated fibroid. A diagnosis of pedunculated fibroid was made.

Case vii (Figs. 7a and b). This patient, colored, aged twenty-six, complained of almost continuous uterine hemorrhage for twenty days, following seven weeks of amennorrhea. During the last two weeks of this time she had nausea and vomiting and cramp-like pains in the left lower quadrant. Examination: There was free blood in the vagina and the cervix was slightly softened. The corpus of the uterus was anterior and slightly enlarged. There was a mass palpable in the left adnexa approximately 6 cm. in diameter and fluctuating. The history pointed definitely to ectopic pregnancy but the mass felt like an ovarian cyst. After the injection of oil, the skiagram (Fig. 7a) showed (1) marked evidence of disease of both tubes with almost complete obliteration of the right tube, (2) a marked widening of the lower segment of the uterine cavity (cf. Fig. 1), (3) a filling defect near the fundus of the uterus on the right side. This was the first of its kind that I had seen, and I was unable to account for the widening of the lower segment and the filling defect. At operation there was found bilateral subacute salpingitis, a cyst of the left ovary and multiple fibroids of the corpus of the uterus.

Both tubes, the cyst of the left ovary, and the corpus of the uterus were removed. This patient had a temperature of 100°F. for several days but left the hospital on the twentieth day in excellent condition.

Pathological diagnosis: sub-acute purulent salpingitis; simple cyst of the ovary; pedunculated submucous fibromyoma with secondary chronic inflammation and multiple intramural fibromyomata.

[3] This patient was from the service of, and was operated on, by Dr. Raymond Watkins.

SUMMARY

The presence of fibroids in the uterus is nearly always indicated by a deformity of the uterine canal.

The presence of intrauterine pedunculated fibroids can be ascertained by the shadow of the tumor itself and by the distortion of the uterine canal and the filling defects.

Intravaginal tumors may be outlined by the iodized oil and intra-abdominal tumors may occasionally be visualized in the same way.

In cases of large submucous myomata the uterine cavity often takes the shape of a crescent and in multiple tumors of the uterus the cavity is visualized in irregular form and sometimes enormously enlarged.

Since myomectomy is the procedure of choice in all but the exceptional case where the woman is under forty, it will seem important to be able to foresee, at least in a certain measure, the possibility of a conservative operation. Radiologic exploration of the uterus after the injection of iodized oil, in case of myomata, gives one a clear view of the relationship between the myomata and the cavity of the uterus and also establishes the fact as to the permeability of the tubes. This last fact is of importance since one would not want to conserve the uterine corpus unless the tubes were permeable.

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