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## FULL TERM PREGNANCY WITH A HUGE RECURRENT IMMATURE TERATOMA: A CASE REPORT.

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### ABSTRACT

Immature teratoma is an infrequent ovarian tumor in reproductive female, especially occurring with pregnancy. This report describes the radiologic findings in a 35-year-old woman, with 32-weeks pregnancy, presented a huge multiloculated cyst in the Cul-de-sac. Thirteen years ago, she was diagnosed to have an immature teratoma, but her treatment was not completed. At this time, cesarean section was performed when her pregnancy reached 36 weeks, but the biopsies of abdominal cysts revealed multicystic peritoneal mesothelioma. No further treatment was done because the patient refused to have.

### INTRODUCTION

Any malignancy during pregnancy is rare, with an estimated incidence of 0.07-0.1%.<sup>1</sup> Germ cell tumors are the most frequent ovarian malignancies associated with pregnancy.<sup>2,3</sup>

Ovarian tumors may cause serious complications during pregnancy and postpartum. Some of these include adnexal torsion and obstruction to vaginal delivery. The most common ovarian tumors are cystic. Beischer and associates (1971) described 164 ovarian tumors diagnosed during pregnancy; one fourth were cystic teratomas. Ovarian tumors complicating pregnancy often are entirely overlooked (Stedman and Kline, 1988). Careful examination of all pregnant women would eliminate some, but not all, of these missed tumors. If an ovarian tumor does not occupy the pelvis, diagnosis through physical examination is especially difficult because abdominal enlargement may attribute to a more advanced pregnancy, multiple fetuses, or hydramnios; and the true condition may not be recognized until after labor. Sonography often provides accurate differentiation between uterine enlargement and an extrauterine cystic mass.

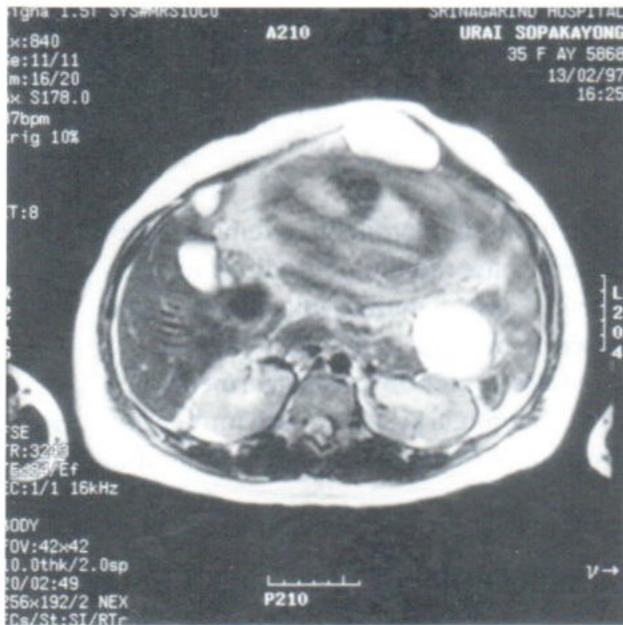
### CASE REPORT

A 35-year-old woman presented to another hospital with a larger pelvic mass for gestational age, 32 weeks from the history of menstruation. Ultrasound revealed multiloculated cyst in the Cul-de-sac, 20 cm in diameter. She was referred to Srinagarind hospital, Faculty of Medicine. Her previous medical record, 13 years ago, revealed immature teratoma with incomplete treatment (right salpingo-oophorectomy, 1 circle of VAC) because of her refusal. The MRI revealed huge multiple cystic masses occupying in the pelvic cavity and extending to the middle part of abdomen. The masses contained solid components also, esp. in the anterior aspect (figure 1). There were multiple cystic masses involving right posterior lobe of liver, spleen, and subcutaneous plane at epigastrium and umbilical regions (figure 2-5). There were obstructive hydronephrosis of both kidneys. The diagnosis of malignant cystic masses with pregnancy was suggested. She was performed cesarean section 3 weeks later (36-week gestational age). During this operation, left tubal resection and 2 biopsies of small cysts at abdominal wall and uterus were also performed.

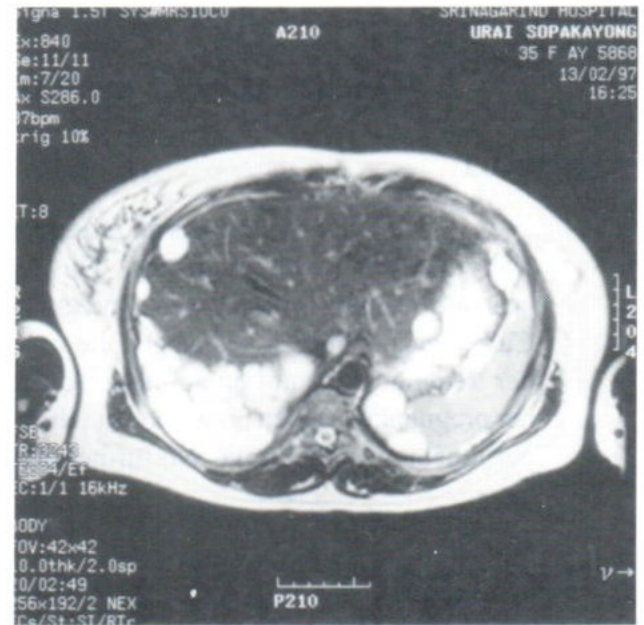
Pathological examinations revealed multicystic peritoneal mesothelioma. Her previ-

ous specimens were reviewed and the diagnosis of immature teratoma was confirmed. Although

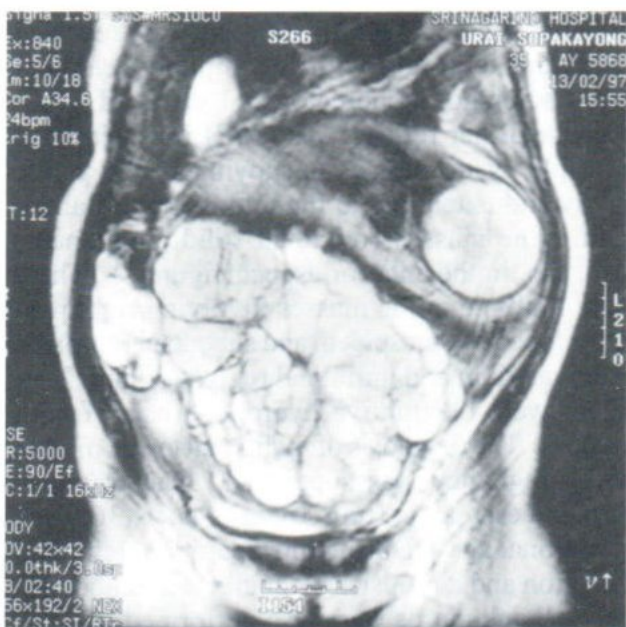
her gynecologist suggested further treatment, she again refused to have.



**Fig. 1.** Axial T2-weighted FSE (TR/TE = 3243/84) revealed 4 x 3 cm intra-abdominal cystic lesion attached to peritoneum anteriorly.



**Fig. 2.** Axial T2-weighted FSE (TR/TE = 3243/84) revealed multiple cystic components in the right posterior lobe of liver and scattering lesions at segment 3, 7 and around the splenic surface.

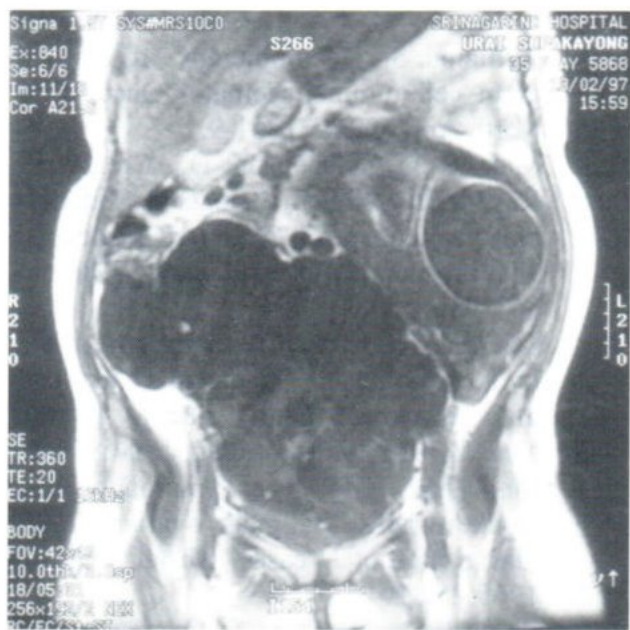


**3. (Coronal)**



**4. (Sagittal)**

**Fig. 3. (Coronal), Fig. 4. (Sagittal):** Coronal T2-weighted FSE (TR/TE = 5000/90) revealed multiloculated cystic mass (hypersignal intensity) occupied the entire pelvic cavity displacing the pregnant uterus upward, and the urinary bladder right antero-inferiorly.



**Fig. 5.** Coronal T1-weighted FSE (TR/TE = 360/20) revealed multi-loculated cystic mass (hyposignal intensity) occupying the entire pelvic cavity and displacing the pregnant uterus upward, while the urinary bladder was also displaced right anteroinferiorly.

## DISCUSSIONS

Teratomas are the most common germ cell tumor of the ovary. They can be subclassified into mature teratoma, monodermal teratoma, and immature teratoma. Immature teratomas are composed of tissues derived from the three germ layers; ectoderm, mesoderm, and endoderm; and, in contrast to the much more common mature teratoma, they contain immature or embryonal structures. Mature tissues are frequently present and sometimes may predominate. In these cases, the tumor should be differentiated from a mature teratoma with malignant transformation. The presence of immature or embryonal elements as opposed to the neoplastic transformation of mature tissues can be used to differentiate these two types of neoplasm.<sup>4</sup>

The immature teratoma of the ovary is an uncommon tumor, comprising less than 1% of ter-

atomas of the ovary.<sup>5</sup> In contrast with the mature cystic teratoma, which is encountered most frequently during the reproductive years but occurs at all ages, the immature teratoma has a specific age incidence, occurring most commonly in the first two decades of life and being almost unknown after the menopause.<sup>6</sup> These tumors are likely to be large, predominantly solid masses with areas of soft, fleshy, pale pink or tan tissue. The contralateral ovary may be involved if there is extraovarian spread, but these tumors are rarely bilateral. In 10%, the contralateral ovary contains another benign ovarian tumor.<sup>7</sup> The tumors are graded according to the amount of immature tissue present. Grade 1 tumors have immature glial tissue occupying less than one low power field, grade 2 tumors have immature glial tissue in two to three low power fields in one slide, and grade 3 tumors have four or more fields in one slide.<sup>8-9</sup> Peritoneal seeding from these tumors may be represented by mature glial seeding or gliomatosis.

Although ultrasound has been revolutionary, an alternative fetal and maternal imaging technique would be useful when sonography is limited by technical factors. MRI fills this need. Similar to ultrasound, MRI is non-invasive, involving no ionizing radiation, and can provide images in multiple planes. Unlike ultrasound, interference from skeletal, fatty, or gas-filled structures is not a problem with MRI, and imaging of deep pelvic structures does not depend on the presence of an acoustic window. Because tissue characteristics rather than those of acoustic impedance provide the contrast in MRI, it might show features not demonstrable with ultrasound.<sup>10-11</sup>

In our case, MRI demonstrated a huge multiple cystic masses with solid components occupying almost all peritoneal cavity and involving solid organs (e.g. liver) also. Although the general recommendation for suspected malignancy is laparotomy as soon as possible; this case was delayed until full term pregnancy, because the diagnosis was not made until late in pregnancy (33 weeks) and she was alive longer than usual in the case of immature teratoma. While the prog-

nosis of this tumor with incomplete treatment should be described with 2 years survival,<sup>12</sup> she had survived for 13 years after first diagnosis. During cesarean section, 2 biopsies were taken from the abdominal wall cysts and were reported as multicystic peritoneal mesothelioma, which is a benign tumor. However the first section was confirmed as immature teratoma, but the components in the pathological section mostly contained mature cell with a few component of immature cells. So we made her diagnosis as immature teratoma. At this time, her staging was changed to at least IIIc, so her gynecologist suggested further treatment, such as exploratory laparotomy with tumor resection and adjuvant chemotherapy, but she refused to have any further treatment and went away.

We cannot predict the end of this case. We hope that we shall see her for radiological examinations again, perhaps in a very late stage.

## CONCLUSIONS

Immature teratoma in a pregnant woman is rare and the recurrent one after 13 years of the first presentation is even rarer. The first pathological diagnosis was reviewed and confirmed the diagnosis of immature teratoma; even receiving incomplete treatment, she was still alive until this occurrence. Although the histopathological pictures in this second presentation do not absolutely confirm the diagnosis of an immature teratoma, this condition is still the most probable diagnosis, so her obstetricians have advised her to be treated as a recurrent immature teratoma. Unfortunately, she refused to have any more treatment and went away.

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