

# Mature Cystic Teratoma Mimicking Ectopic Pregnancy in A Patient with Spontaneous Abortion: A Case Report

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A case of mature cystic teratoma mimicking ectopic pregnancy in a patient with positive serum  $\beta$ -hCG and adnexal mass is presented. A 25 year-old woman referred to emergency clinic with pelvic pain and vaginal bleeding with passage of blood clots.  $\beta$ -hCG level was 1618 IU/L. Ultrasonography revealed a heterogeneous adnexal mass 63x42 mm in size and absence of intrauterine gestational sac. Based on these findings, a diagnosis of ectopic pregnancy was suspected. At laparoscopy, mature cystic teratoma was discovered. The patient was treated with cyst removal. Certain diagnosis was proved to be mature cystic teratoma simultaneously occurring with spontaneous abortion, mimicking ectopic pregnancy. Although the presence of an adnexal mass in the absence of an intrauterine gestational sac with positive  $\beta$ -hCG level above the threshold level, may indicate an ectopic pregnancy; differential diagnosis of mature cystic teratoma simultaneously occurring with spontaneous abortion should be kept in mind.

**Key words:** Ectopic pregnancy, Adnexal mass, Mature cystic teratoma, Laparoscopy

*Gynecol Obstet Rebrod Med;15:3 (168 - 170)*

## Introduction

Ovarian teratomas are the most common germ cell neoplasm and, in many series, the most common excised ovarian neoplasm. Teratomas comprise a number of histologic types of tumors, all of which contain mature or immature tissues of germ cell (pluripotential) origin. The most common of these tumors, the mature cystic teratoma (also known as dermoid cyst), typically contains mature tissues of ectodermal (skin, brain), mesodermal (muscle, fat), and endodermal (mucinous or ciliated epithelium) origin. Mature cystic teratomas usually occur in the reproductive age group. They are almost always found in the ovary and are the most common type of ovarian germ cell neoplasm. Dermoid cysts are usually asymptomatic and are discovered as an incidental finding on physical or radiologic examination or at the time of laparoscopy and/or laparotomy.<sup>1</sup>

Vaginal bleeding is the most common cause of presentation to the emergency department in the first trimester. Clinical assessment is difficult, and sonography is necessary to determine if a normal fetus is present and alive and to exclude other causes of bleeding such as ectopic or molar preg-

nancy. Early pregnancy failure and ectopic pregnancy are common diagnoses in the first trimester. Ectopic pregnancy represents approximately 1 to 3% of all pregnancies and is still a leading cause of maternal mortality.<sup>2</sup>

In the present article, a case of dermoid cyst simultaneously occurring with spontaneous miscarriage mimicking ectopic pregnancy is described in a patient with a positive quantitative  $\beta$ -hCG and a heterogeneous pelvic mass and without a gestational sac in the uterine cavity.

## Case Report

A 25 year-old woman, gravida 1, para 1, presented to the emergency clinic complaining of 6 weeks of amenorrhea, lower abdominal pain and vaginal bleeding with passage of blood clots. She did not remember vaginal passage of tissue and did not take any medicine for pain relief. She denied prior pelvic inflammatory disease, use of an intrauterine device, or previous abdominal surgery. Physical examination revealed an oriented young woman with blood pressure of 110/70 mmHg and pulse 86 beats per minute. In the pelvic examination, new, red blood clots were seen in the vaginal fornixes, she had no cervical motion tenderness. A bimanual pelvic examination revealed a normal-sized, anteflexed uterus. The right adnex contained a slightly tender, solid-cystic mass; the left adnex was normal. Complete blood cell count, liver, kidney and thyroid function tests, blood glucose level were proved to have normal values. Serum quantitative  $\beta$ -hCG level was 1618 IU/L. Transvaginal ultrasonography revealed no intrauterine pregnancy with an endometrial thickness of 13 mm and a hetero-

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Submitted for Publication: 01.04.2009

Accepted for Publication: 09.06.2009

geneous solid-cystic mass 63X42 mm in size with a dense content and thick sides in the right adnexa.

The woman was taken to the operating room with the preoperative diagnosis of probable ectopic pregnancy. She underwent diagnostic and operative laparoscopy, as is the practice for stable ectopic pregnancies at our institution. At laparoscopy, a mature cystic teratoma, approximately 7 cm in size including maxillar bone and teeth with thick, yellow-white sebum, (Figure 1-3) was discovered with normal tubes and nongravid uterus. The patient was treated with cyst removal. Final pathology report also confirmed mature cystic terama. As the vaginal bleeding progressed during the operation and passage of placental tissues were seen, the certain diagnosis was determined to be incomplete abortion so, an endometrial curettage was performed. Histopathologic examination of the curettage material also confirmed incomplete abortion with degenerated placental tissues and decidualized endometrium. The patient's postoperative course was uncomplicated, and she was discharged on the second postoperative day.

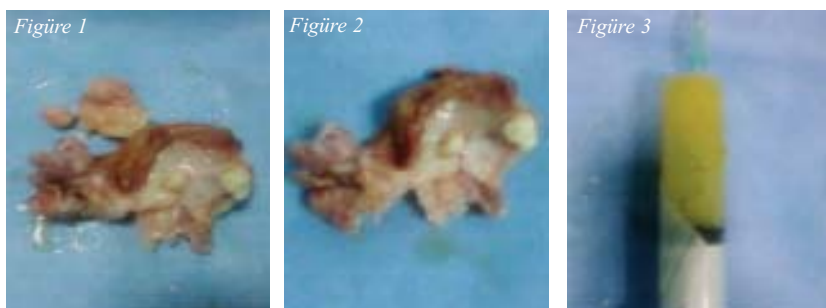


Figure 1 and Figure 2: Figure 1 and Figure 2 show maxillar bone and teeth in the mature cystic teratoma.

Figure 3: Figure 3 shows the thick, yellow-white sebum.

## Discussion

Incomplete abortion is the term that describes a patient with a positive pregnancy test and vaginal bleeding, with or without a closed cervical os. Transvaginal ultrasound will show an endometrial thickness of any size and heterogeneous tissue with or without a visible gestational sac. This tissue distorts the endometrial echo. This is sometimes also referred to as retained products of conception. Multiple studies have not come to an agreement regarding an endometrial thickness cut-off to distinguish complete miscarriage from incomplete miscarriage; therefore this measurement should not be used in the diagnosis. Importantly, ectopic pregnancy can often not be excluded by sonographic findings in this setting.<sup>2</sup>

Ectopic pregnancy is still a leading cause of maternal mortality. The classical triad seen is pain, abnormal vaginal bleeding and a palpable adnexal mass; however this is seen in 45% of patients with ectopic pregnancy.<sup>3</sup> Improved ultrasound technology and high-frequency endovaginal transducers enabled early diagnosis of abnormal and ectopic pregnancies, decreasing maternal mortality and morbidity. Although, the most definitive sonographic finding is the visualization of an extra-uterine gestational sac with a yolk sac or an embryo, in the setting of a positive  $\beta$ -hCG above 1500 to 2000 IU/L and absent intra-uterine gestational sac, the pre-diagnosis of ectopic pregnancy can be made by the finding of an adnexal mass.<sup>2</sup> The presence of an extra-

ovarian adnexal mass is the most common sonographic finding in ectopic pregnancy, because the fallopian tube is the most common location for an ectopic pregnancy.<sup>4</sup> The sonographic appearance varies depending on the presence or absence of hematoma and the location.

Mature cystic teratomas (a more appropriate term than the commonly used "dermoid cysts") are cystic tumors composed of well-differentiated derivations from at least two of the three germ cell layers (ectoderm, mesoderm, and endoderm). They affect a younger age group (mean patient age, 30 years) than epithelial ovarian neoplasms. Mature cystic teratoma is the most common germ cell neoplasm and, in some series, the most common ovarian neoplasm removed at surgery.<sup>5,6</sup> Most mature cystic teratomas are asymptomatic. Abdominal pain or other nonspecific symptoms occur in the minority of patients. Mature cystic teratomas requiring removal can be treated with simple cystectomy. The tumors are bilateral in about 10% of cases.<sup>7</sup>

The case presented here is thought to be ectopic pregnancy initially, in the setting of a  $\beta$ -hCG above 1500 IU/L, presence of a heterogeneous adnexal mass seen in sonography and absence of an intrauterine gestational sac with clinical findings such as pelvic pain and irregular vaginal bleeding. However, the certain diagnosis was proved to be mature cystic teratoma simultaneously occurring with incomplete spontaneous abortion. The occurrence of mature cystic teratomas associated with a spontaneous abortion mimicking ectopic pregnancy has been infrequently described in the literature. Kutteh et al.<sup>1</sup> described the occurrence of a mature cystic teratoma of the fallopian tube discovered at laparoscopy for an ectopic pregnancy. Massouda et al.<sup>8</sup> presented a rare finding of a benign teratoma of the fallopian tube occurred in association with a tubal pregnancy. Pai et al.<sup>9</sup> served up a case of mature cystic teratoma of the fallopian tube associated with ectopic pregnancy. Hseih et al.<sup>10</sup> also described a benign cystic teratoma of unilateral fallopian tube associated with intrauterine pregnancy. Mekni et al.<sup>11</sup> described a mature cystic teratoma of the fallopian tube found incidentally in a 35-year-old woman operated

for suspicion of ectopic tubal pregnancy. Miyake and Ireland<sup>12</sup> reported the first instance of an ovarian homunculus occurring simultaneously with an intrauterine pregnancy. Nzegwu et al.<sup>13</sup> put forward a case of mature cystic renal teratoma in a 25 year-old woman with ipsilateral hydronephrosis and spontaneous abortion. Feltingoff et al.<sup>14</sup> represented an ovarian pregnancy with ipsilateral mature cystic teratoma of the ovary.

We present this case of the incidental finding of a mature cystic teratoma of the ovary to call attention to the possibility of additional pathologic findings at laparoscopy for an ectopic pregnancy. In spite of the fact that the presence of an adnexal mass in the absence of an intrauterine gestational sac with a positive quantitative  $\beta$ -hCG level above the threshold level, may indicate an ectopic pregnancy; differential diagnosis of mature cystic teratoma simultaneously occurring with spontaneous abortion should be kept in mind.

## Ektopik Gebeliği Taklit Eden Matür Kistik Teratom: Olgu Sunumu

Bu makalede, klinik, radyolojik ve biyokimyasal olarak ektopik gebeliği taklit eden matür kistik teratom olgusu sunulmuştur. Pelvik ağrı ve pıhtılı vajinal kanama şikayetleriyle acile başvuran 25 yaşında,  $\beta$ -hCG'si 1618 IU/L olan hastanın ultrasonografisinde 63x42 mm boyutlarında pelvik kitle tespit edildi ve intrauterin gestasyonel kese gözlenmedi. Bu bulgular ışığında ektopik gebelik ön tanısıyla hastaya laparoskopi uygulandı. Laparoskopi sırasında maxilla ve mandibula kemiklerinin gelişim gösterdiği matür kistik teratom izlendi. Spontan abort ile eş zamanlı tespit edilen matür kistik teratom tanısı patolojik da olarak kesinleştirildi. İntrauterin gestasyonel kese yokluğunda, pozitif serum  $\beta$ -hCG ile birliktelik gösteren adneksiyel kitle olgularında ilk akla gelen tanı ektopik gebelik olsa da, ayırıcı tanıda spontan abortus ile eş zamanlı olabilecek matür kistik teratom akılda tutulmalıdır.

**Anahtar Kelimeler:** Ektopik Gebelik, Adneksiyel Kitle, Matür Kistik Teratom, Laparoskopi

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