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Clinical profile and outcome of chronic ectopic pregnancy in tertiary care hospital

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Abstract
Introduction: Chronic ectopic pregnancy (CEP) has low serum HCG and methotrexate tolerance (MTX). CEP complicates EP therapy. It may resolve spontaneously. Histologically, CEP has a compact adnexal mass with degraded chorionic villi, necrosis, and many blood clots from repeated small fallopian tube wall ruptures. CEP with asymptomatic pelvic mass and low serum hCG.
Methods: Dr. Rajendra Prasad Government Medical College in Tanda's Department of Obstetrics & Gynecology performed this prospective observational research on pregnant women with chronic ectopic pregnancies after protocol review committee and institutional ethics committee approval. All eligible prenatal clinic and labour room patients were studied from February 2020 to January 2021. Prenatal clinic and labour room patients with clinical features and repeated chronic ectopic pregnancy diagnosis were included after written informed permission.
Results: Beta-HCG concentrations of 3000-5000 mIU/ml (20%), less than 1500 mIU/ml (3 instances), and more than 5000 mIU/ml (1 case) were found (1 cases). Hemoglobin ranged from 7 to 10 g/dl in all individuals. The most common locations for ectopic pregnancy were the ampulla (80%) and fimbria (20%). (7 cases). In four out of the eighty percent of cases of prolonged ectopic pregnancy, surgical salpingectomy was done. Blood transfusions were required for five individuals with persistent ectopic pregnancy. One unit of blood was given to 60% (3 cases), two units to 20% (1 case each), and three units to 20%.
Conclusion: It is rare for a persistent ectopic pregnancy to be misdiagnosed before surgery. If a young multiparous woman with AUB and abdominal pain has an ultrasound that shows a heterogeneous mass in the POD and/or adnexa with no internal vascularity on CD, persistent ectopic pregnancy should be the first diagnosis.

Keywords: Chronic ectopic pregnancy, HCG, UTP

Introduction

Ectopic pregnancy occurs when an embryo implants and develops outside of the endometrium. Cavite from acute hemoperitoneum to persistent ectopic, there are many presentations. Ectopic pregnancy may become a life-threatening condition if it is not promptly diagnosed and treated [1]. Vaginal bleeding, pelvic discomfort, stomach pain, a painful cervix, an adnexal lump, or adnexal soreness are all indications of an ectopic pregnancy [2]. A pelvic hemocoel develops in persistent ectopic pregnancy as a result of several tiny peritoneal hemorrhages. Ectopic pregnancies happen in one to two percent of pregnancies, with a high prevalence of four percent when using assisted reproductive technologies. Fallopian tube is the most frequent location for ectopic pregnancy (93 percent to 97 percent). Of them, the isthmus contains 13% of them, the ampulla contains 75%, and the fimbriae contain 12%.

Ectopic pregnancy causes 6% of maternal fatalities during the first trimester of pregnancy. Because it is uncommon for the fallopian tube to enlarge to the extent of carrying a second trimester baby, ectopic pregnancies seldom continue asymptomatically into the second trimester. This unusual chronic ectopic pregnancy case has a large adnexal mass and no typical symptoms.

Ectopic pregnancy (EP) is a variation known as chronic ectopic pregnancy (CEP), which is characterized by low or nonexistent blood levels of human chorionic gonadotropin (HCG) and methotrexate tolerance (MTX). CEP is difficult to identify and may complicate the course of EP patients. It typically has a protracted, sedentary clinical course and may possibly go away on its own [3]. Histologically, CEP is distinguished by a compact adnexal mass with necrosis, numerous blood clots, and deteriorated chorionic villi as a result of repetitive, minor fallopian tube wall ruptures. CEP as a pelvic mass with little symptoms and a low or nonexistent hCG level in the blood [4].

Histologically, CEP appears as an adnexal mass that is encircled by adhesions and contains hemocoel, blood clots, and gestational tissue [5, 6].

Methods

This prospective observational study was undertaken in the Department of Obstetrics & Gynecology, Dr. Rajendra Prasad Government Medical College in Tanda on pregnant women with persistent chronic ectopic pregnancies after protocol review committee and institutional ethics committee approval. From February 2020 through January 2021, the study included all eligible prenatal clinic and labor room patients. Prenatal clinic and labor room patients with clinical features and persistent chronic ectopic pregnancy diagnosis were included after written informed agreement. All pregnant women in the first trimester attending prenatal clinic and labor room of Department of OBG with confirmed chronic ectopic pregnancy and willing to participate were included. Intrauterine pregnancies and other hemoperitoneum causes were excluded. Data were presented as frequency and percentages.

Results

During the study period of one year, 8,815 patients were delivered to the institute. Seventy-two patients were diagnosed with ectopic pregnancy. Hence, the incidence of ectopic pregnancy was 0.81% in our study. Only 5 patients were diagnosed in chronic ectopic frequency (CEP).

Baseline Characteristics

Table 1 shows that all women were married. 20% case were aged ≤ 30 years while 80% case were aged more than 30 years. The mean age was 33.60 ± 3.0 years. 40% (2 cases) were nullipara, 60% (3 cases) were primipara and none of cases were multipara. Our center being tertiary center, 40% (2 cases) were referred from other centers while 60% (3 cases) were diagnosed at our hospital. Majority of the patients 60% (3 cases) presented at 6 to 8 weeks of gestation followed by 40% (2 cases) at less than 6weeks of gestation. Amenorrhea and pain abdomen was the most common complaint seen in 100% (5 cases) followed by Vaginal Bleeding/Spotting (60%) and Fainting Attack (20%). 80% cases were positive UTP. All of the patients were positive in Culdo/Paracentesis.

Beta-HCG levels in the patients

Table 2 shows that the beta-HCG levels of more than 5000mIU/ml was observed in 20% (1 cases), beta-HCG of less than 1500mIU/ml in 60% (3 cases, and beta-HCG in the range of 3000-5000 mIU/ml in 20% (1 cases). All of the patients had hemoglobin range of 7-10 gm/dl.

Site of Ectopic

Most common site of ectopic pregnancy was ampulla region (80%), followed fimbrial end of the tube 20 (7 cases), (Table 3).

Management

Table 4 shows that the surgical salpingectomy was the most common procedure done for chronic ectopic pregnancy in 80% (4 cases) while 20% cases were Surgical Salpingo-oopherectomy.

Blood Transfusion

Table 5 shows that the, out of 5 patients of chronic ectopic pregnancy100% (5 cases) required blood transfusion. It was further observed 60% (3 cases) were transfused with one units of blood, 20% (1 cases) each were transfused with two and three units of blood.

Table 1: Baseline Characteristics

Baseline Characteristics	Frequency (N=5)	Percentage (%)
Marital Status		
Married	5	100%
Unmarried	0	0
Age Categories (Years)		
≤30	1	20%
>30	4	80%
Age Mean (Years)	33.60 ± 3.0	
Parity		
Nullipara	2	40%
Primipara	3	60%
Multipara	0	38.9%
Referral Status		
Non-Referred	3	60%
Referred	2	40%
Gestational age at time of admission		
≤6 weeks	2	40%
6wks, 1day to 8 weeks	3	60%
Symptoms		
Amenorrhea	5	100%
Abdominal Pain	5	100%
Vaginal Bleeding/Spotting	3	60%
Fainting Attack	1	20%
UPT		
Positive	4	80%
Negative	1	
Culdo/Paracentesis		
Positive	5	100%
Negative	0	0

Table 2: Beta-HCG levels in the patients

Beta-HCG levels (mIU/ml)	Frequency (N=5)	Percentage (%)
<1500	3	60%
1500-3000	0	0
3000-5000	1	20%
>5000	1	20%
Hemoglobin levels (gm/dl)		
<5	0	0
5-7	0	0
7-10	5	100%
>10	0	0

Table 3: Site of Ectopic

Site of Ectopic	Frequency (N=5)	Percentage (%)
Ampulla	4	80%
Fimbria	1	20%

Table 4: Management

Management	Frequency (N=5)	Percentage (%)
Surgical Salpingectomy	4	80%
Surgical Salpingo-oopherectomy	1	20%

Table 5: Blood transfusion

Blood Transfusion	Frequency (N=5)	Percentage (%)
1 Unit	3	60%
2 Unit	1	20%
3 Unit	1	20%

Discussion

CEP is a form of EP characterized by low or absent serum hCG

levels and an adnexal mass with degenerated or avital chorionic villi, fbrosis, necrosis, and blood clots. In a case report and systematic review of the literature, we analyzed the clinical presentations, management, and outcomes of 399 cases of CEP. We found that the most common presenting symptoms were abdominal pain and irregular vaginal bleeding, whereas an asymptomatic presentation was only seen in 18% of cases. Of note, serum hCG was negative in a high proportion of CEP cases, namely in 32%. This is consistent with an inactive or avital trophoblast in women with CEP. At presentation, an adnexal mass was visible by ultrasonography in around half of all the cases, but no distinct morphological pattern of the CEP adnexal masses could be identified. Most authors described the ultrasonographic images of the adnexal masses as inhomogeneous or complex [7].

In our study, all women married. 20% were under 30 and 80% were over 30. The mean age was 33.60±3.0 years. 40% (2 cases) were nullipara, 60% (3 cases) primipara, and no multipara. Our tertiary center diagnosed 60% (3 cases) and referred 40% (2 cases). 60% (3 instances) manifested at 6–8 weeks, followed by 40% (2 cases) at less than 6 weeks. Amenorrhea and abdominal pain were the most common complaints (100%) followed by vaginal bleeding/spotting (60%) and fainting attacks (30%). (20 percent). 80% were UTP positive. All patients had positive Culdo/Paracentesis. In a study by Singh, *et al.* [8] the mean age group of study population was 28.28±4.19 (1SD) yrs with 26.78 to 29.78 yrs and range of patient's age were 20 to 38 years (Median age 28 yrs). In a study by Ugur, *et al.*, [9] the most common complaints was pelvic pain and vaginal bleeding and a history of amenorrhea present in the majority of cases.

The beta-HCG levels of more than 5000 mIU/ml was observed in 20% (1 cases), beta-HCG of less than 1500mIU/ml in 60% (3 cases, and beta-HCG in the range of 3000-5000mIU/ml in 20% (1 cases). All the patients had hemoglobin range of 7-10 gm/dl. In a study by Ugur, *et al.* [9] a hemoglobin value less than 10 gm/dl was noted in 11 (11.7%) cases. Beta-HCG reveal positive results in 57 (91.9%) patients and was negative 5 (8.1%) patients.

Surgical salpingectomy was the most common procedure done for chronic ectopic pregnancy in 80% (4 cases) while 20% cases were Surgical Salpingo-opherectomy. In a study by Behera, *et al.* [10] right side tubal pregnancy is more common than left side. Most common site of ectopic pregnancy was in ampulla of fallopian tube51.6%. Isthmic tubal pregnancy was seen in 16.1% and 6.5% cases had cornual pregnancy. Only 3.2 % had ovarian pregnancy.

Out of 5 patients of chronic ectopic pregnancy100% (5 cases) required blood transfusion. It was further observed 60% (3 cases) were transfused with one units of blood, 20% (1 cases) each were transfused with two and three units of blood. In a study by Gyamtsho, [11] 51.92% of chronic ectopic patients was blood transfusion.

Conclusion

Chronic ectopic pregnancy is rare and is often misdiagnosed preoperatively. Chronic ectopic pregnancy should be the provisional diagnosis in a young multiparous woman with AUB and/or abdominal pain, if the ultrasound shows the presence of a heterogeneous mass in the POD and/or adnexa, with no internal vascularity on CD.

Conflict of Interest

Not available

Financial Support

Not available

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