

Diagnostic dilemma in cases of ectopic pregnancy: a five year prospective study at Tribhuvan University Teaching Hospital

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Objective: To determine the incidence of ectopic pregnancy in Tribhuvan University Teaching Hospital (TUTH) and to find out the atypical presentations of ectopic pregnancy that had lead difficulties in diagnosing the cases of ectopic pregnancy leading to increase morbidity.

Study design: It is a prospective, descriptive study done in the Dept. of Obstetrics/Gynaecology, TUTH, during the period of Baisakh 2057 – Chaitra 2061 (April 2001-April 2005).

Results: There were total of 174 cases of ectopic pregnancy during the period of five years accounting 1.15 % of all deliveries. Majority of them were multipara (P_{2-3}) 39.5 %. Among the 174 women 48.9% carried the risk factors. The commonest risk factor being secondary subfertility (25.9%) followed by history of dilatation & curettage (D & C) (18.5%) and reversal of tubal ligation (17.6%). Not all the patients had the classic triad of ectopic pregnancy (98.9% had pain, 70.7% had amenorrhea and only 58% had bleeding). Only 20% presented with syncope (the typical symptom of ruptured ectopic pregnancy). The condition was confirmed by USG in 82%. Urinary human chorionic gonadotrophin (hCG) was present in 97.1 %. Mild anaemia (8-10gm% Hb) was present in 46.6% cases where as only 4% had severe anaemia <6gm. Among these anaemic patients 60% needed blood transfusion. Twenty five (14.3%) out of 174 cases had presented with atypical symptoms resulting difficulty in diagnosis (8 cases confused with GI disorders and 17 cases with gynecological disorders).

Conclusion: USG and urinary hCG are not confirmatory diagnostic tools in all cases of ectopic pregnancies. For that serum hCG and diagnostic laparoscopy should be included to improve in the management of ectopic pregnancy.

Introduction

Ectopic pregnancy still remains a leading cause of maternal mortality and morbidity in the first trimester of pregnancy. It was first recognized in 1693, since then the incidence of ectopic pregnancy is rising, the reasons being the increasing number of sexually transmitted diseases, pelvic inflammatory diseases, sterilization, tuboplasty and assisted reproductive technology.

The clinical diagnosis of acute ectopic pregnancy with evidences of hemoperitoneum and shock is not a difficult task. However it is indeed difficult at times to diagnose clinically the unruptured, subacute and chronic ectopic pregnancy because of their atypical presentations.

Though the incidence of ectopic pregnancy is increasing death from it is decreasing due to awareness of the condition and the improved diagnostic and therapeutic modalities. Three major advances have made the early diagnosis of ectopic pregnancy possible, they are highly sensitive serum

β hCG, transvaginal sonography and laparoscopy. The advantage of early diagnosis is not only to reduce mortality and morbidity from EP but to provide possible expectant medical management and the conservative surgery where fertility can be retained.

Methodology

It is a prospective study conducted in the department of Obs / Gyn, Tribhuvan University Teaching Hospital during the period of five years (Baisakh 2057 – Chaitra 2061 i.e. April 2000 – March 2004). All patients with ectopic pregnancy confirmed by laparotomy and histopathology were included.

Results

There were total of 174 cases of cases of ectopic pregnancy during the period of five years accounting 1.15% of all

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deliveries. The commonest age group was 25-29 making about 30% of all ectopic pregnancy. Majority of them were multipara (39.5%) followed by nullipara (27%) and primipara (26%). The commonest site of ectopic pregnancy was tubal (92.5%) followed by cornual (3.4%) then the ovarian pregnancy (1.3%).

Among 174 patients of EP almost half (48.9%) of the cases carried the risk factors. The commonest risk factor being secondary subfertility (25.9%) followed by history of D&C (18.8%) and sterilization (17.7%).

Not all the patients presented with the classic triad of ruptured ectopic pregnancy (98.9% had pain, 70.7% had amenorrhoea and only 58% had bleeding). Only 20% presented with syncope, which is the typical feature of ruptured ectopic pregnancy. The diagnosis was confirmed by ultrasonography (USG) in 82% cases, Urinary hCG was positive in 97.1%. At the time of admission 46.6% women were found to have mild anaemia (8-10gm% Hb) and 4% had severe anaemia (<6gm %) and 60% of these anaemic women requiring blood transfusion.

Among these 174 cases of EP, 25 (14.3%) presented with atypical symptoms resulting difficulty in the diagnosis. Eight of these cases were confused with GI disorders (two appendicitis, one mucocoele of appendix, one malaena, one subacute intestinal obstruction, one acid peptic disease (APD), one duodenal ulcer (DU) perforation and one was inadequate referral (*Fig.1*).

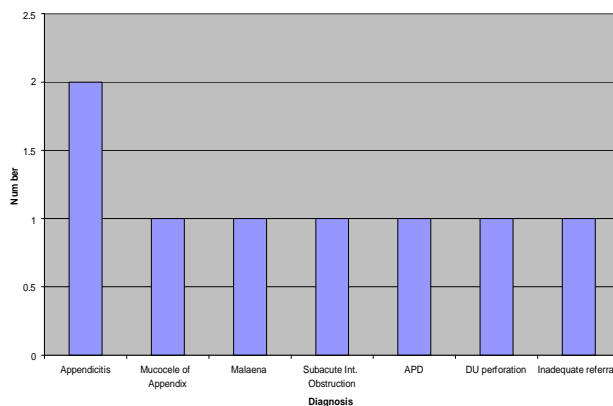


Fig. 1. Diagnostic difficulties with surgical conditions

Similarly seventeen cases were confused with other gynaecological conditions (four tubo ovarian (TO) mass, three ovarian teratoma, two pelvic inflammatory disease (PID), one retention of urine, one threatened abortion, one pelvic abscess, one ascitis, one urinary tract infection (UTI), one twisted ovarian cyst, one bilateral complex pelvic mass

and one was suspected ectopic pregnancy (*Fig.2*).

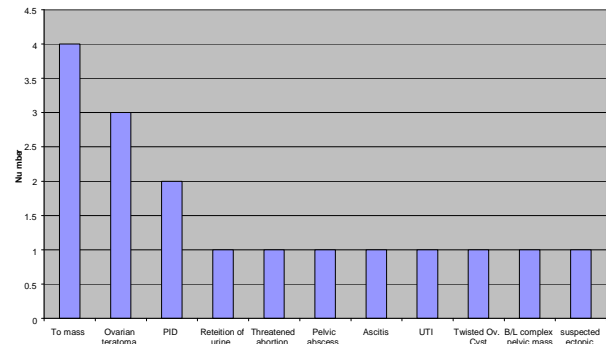


Fig 2. Diagnostic difficulties with other gynecological conditions

Because of the incorrect diagnosis and inadequate referral of these cases surgical intervention was delayed for more than 24 hours increasing the morbidity and prolong hospital stay.

Discussion

The rate of ectopic pregnancy vary up to 35 folds.¹ In India the incidence reported by Indian Council of Medical Research (ICMR1990) task force in their multicentric case control study was 3.86 per 1000 live birth in the hospital reported pregnancies.² Similar to the global trend the incidence of ectopic pregnancy in our set up is also rising from 0.7% in 1990³ to 1.15% of all deliveries in 2004. The morbidity and mortality associated with ectopic pregnancy are directly influenced by the time interval between onset of symptoms and start of treatment. Diagnosis of ectopic pregnancy in cases of ruptured one with the classical symptoms is an easier task, however many a times the diagnosis is difficult to make out with history, associated risk factor and currently available diagnostic tools such as abdominal USG and urinary β hCG as in our series it was difficult in the diagnosis of 25 (14.3%) cases with the help of these diagnostic modalities. Pain was the most common symptoms (98.9%) in our series similar to the study done by Dorfmann and associates which shows 95% followed by history of amenorrhoea (70.7%).⁴ In our series only 82% of the cases were confirmed by abdominal ultrasonography similar to the literature which shows the sensitivity of 83%.⁵ Those women who had difficulties in the diagnosis received the definitive treatment >24 hours after admission leading to prolong hospital stay and high morbidity rate where as majority of the women who had no difficulty in the diagnosis got treatment within 12 hours of admission.

Majority of the cases with difficulties in the diagnosis with ultrasound were confused with the other gynecological conditions such as TO mass, ovarian teratoma and PID etc. Certain numbers of cases (8) were confused with gastro intestinal disorders like appendicitis, APD, DU perforation and malaena etc. Considering the limitations of transabdominal ultrasound in the diagnosis of ectopic pregnancy inclusion of transvaginal ultrasonography definitely help in earlier diagnosis which has sensitivity and specificity 96% and 99% respectively.⁶ In addition to transvaginal ultrasonography highly sensitive serum ² hCG, Doppler sonography and laparoscopy as a diagnostic tool will improve the management of ectopic pregnancy which is one of the grave complications of early pregnancy.

Conclusion

Transabdominal ultrasonography and urinary hCG are not confirmatory diagnostic tools in all cases of ectopic pregnancy with low sensitivity. For the better diagnosis and management of ectopic pregnancy recent diagnostic modalities such as highly sensitive serum ² hCG, Doppler sonography and laparoscopy should be included to reduce morbidity and mortality from ectopic pregnancy.

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