

To evaluate presentation and management of ectopic pregnancy in Indian scenario

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Abstract

Background: Though not an important cause of mortality, ectopic pregnancy is a significant morbidity to reproductive capacity of a female .It accounts for 0.5-1.5 % of all first trimester pregnancies but contributes 3% to pregnancy related deaths.

Methods: This is a prospective descriptive study conducted at SMS medical college,jaipur.120 ectopic pregnancies reporting in last 1 year were studied in their characters, risk factors, presenting sign and symptoms and management.

Results: Incidence of ectopic pregnancy was found to be 1/100 deliveries .The most common age group was 26-30 year. The classical triad was seen in 38.3 of cases.25 of these presented with shock.10 patients had history of previous one ectopic and 2 had previous 2 ectopics. Tubal ectopic was most common ;ampulla being the most common site (70.6%).Right side ectopic was more common . 33.3% of these required blood transfusion.

Keywords: Ectopic pregnancy, hCG, Methotrexate, Laparoscopy

Introduction

Implantation outside the normal endometrial lining of uterine cavity is defined as ectopic pregnancy⁽¹⁾.The classical triad of pain abdomen, amenorrhea and bleeding per vaginum does not occur in all patients. Also there are

no reliable clinical ,sonographic and biological markers to predict rupture .Management of ectopic pregnancy depends on hemodynamic condition , desire of future pregnancy,ultrasound features ,size and β -HCG levels.

Material and methods :This was a descriptive, prospective study of 120 women who presented with clinical features of ectopic pregnancies who reported in last 1 year at zenana hospital chandpole. Their age, marital status, parity, previous ectopic, last child birth was recorded. Vitals were recorded. Per abdomen and per vaginal examination was done.UPT was done to confirm pregnancy history of risk factors was took. Those who were suspected to be ectopic were subjected to TVS and β -HCG levels were sent. Depending on ultrasound findings, hemodynamic condition and β -HCG levels further management was planned.

Those who were clinically unstable,or clinically presenting with features of ruptured ectopic were taken for laprotomy even without awaiting β -HCG report.clinically stable with β -HCG< 5000 IU/l were managed laproscopically.

Clinically stable with mass <3cm on USG and β -HCG <1000IU/L were managed conversatively with β -HCG at 48 hours.if it increased more than discriminatory zone ,repeat USG was done.

Those with β -HCG<2000IU/L and TVS size of adenexal mass <3.5 cm were given medical management with methotrexate.

Data was analysed in MS EXECL and analysed by SPSS 20.0.

Results: 120 ectopic pregnancies were studied. Incidence was 1/100 deliveries. The most common age group was 26-30 years ,the minimum age recorded was 16 years. Most patients were multi gravid -64%.

10% patients had history of previous ectopic out of which 2 had previous 2 ectopic.most common risk factor were history of PID,treatment of infertility. The classical triad was found in 38.3% of patients. Majority had a history of preceeding amenorrhoea. Tubal pregnancy was most common site of ectopic (90.8%) .70.6% of tubal ectopic were ampullary in nature. Most common management for ectopic pregnancy was surgical in 56.6% of diagnosed ectopic pregnancies and most common procedure performed was salpingectomy.

There was need of blood transfusion in 40 patients. No reported mortality.

Demographic data

	number	percentage
<i>Age group</i>		
<20	4	3.33%
21-25	31	25.8%
26-30	71	59.1%
31-35	9	7.5%
>35	5	4.1%
<i>gravida</i>		
primi	56	46.6%
multi	64	53.3%

Risk factors

	Number	percentage
Previous ectopic	12	10
History of sterilisation	20	16.6
History of recanalisation	1	0.83
Infertility treatment	25	20.8
History of PID	45	37.5
History of IUCD	0	0.0

Symptoms and signs

	number	percent
amenorrhoea	100	83.3%
Vaginal bleeding	76	63.3%
Abdominal pain	89	74.1%
Fainting attacks	7	5.8%
Classical triad	46	38.3%
Shock	25	20.8%

Signs

Abdominal guarding and rigidity	76	63.3%
Cervical tenderness	60	50%
Adenexal mass/fullness	45	37.5%

Type of ectopic pregnancy

diagnosis	Number	percentage
unruptured	52	43.3%
ruptured	50	41.6%
Tubal abortion	11	9.1%
chronic	6	5%
Failing ectopic	1	0.83%
<i>site</i>		

tubal	109	90.8%
ovarian	6	2.5%
heterotopic	2	1.6%
Corneal	2	1.6%
Cervical	0	0
Scar site	1	0.83%
Tubal site		
Ampulla	77	70.6%
Isthmus	9	8.2%
Fimbria	11	11%
Isthmo ampullary	13	11.9%

Ultrasonography should be the initial investigation for symptomatic women in their first trimester; when the results are indeterminate, the serum beta human chorionic gonadotropin (beta-hCG) concentration should be measured. Serial measurement of beta-hCG and progesterone concentrations may be useful when the diagnosis remains unclear. Advances in surgical and medical therapy for ectopic pregnancy have allowed the proliferation of minimally invasive or noninvasive treatment.

Nadim B et al⁽³⁾ in 2018 conducted a study where women classified with a probable EP or a pregnancy of unknown location (PUL), i.e. with no signs of extra- or intrauterine pregnancy (IUP), at their first TVS were included, whilst those with a definite tubal EP, IUP or non-tubal EP were excluded from the final analysis. The gold standard for tubal EP was histological confirmation of chorionic villi in Fallopian tube removed at laparoscopy. The performance of blob or bagel sign on TVS in the prediction of definite tubal EP was evaluated in terms of sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV). At primary TVS, 240/849 were diagnosed with probable EP, of which 72.5% were classified as blob sign and 27.5% as bagel sign. The remaining 609/849 were diagnosed with PUL, of which 47 had a final diagnosis of EP (including 24 blob sign, 19 bagel sign and four gestational sac with embryo/yolk sac). 51% blob sign cases and 59% bagel sign cases underwent laparoscopy and salpingectomy; histology proved a tubal EP in 97% of these blob-sign cases and 96.0% of the bagel-sign cases. The sensitivity for the blob and bagel signs in the prediction of definite tubal EP was 89.8% and 83.3%, respectively, the specificity was 99.5% and 99.6%, PPV was 96.7% and 95.2% and NPV was 98.3% and 98.6%. This was

Management

	Number	percentage
expectant	10	8.3
Medical	30	25.0
surgical	68	56.6
Expectant followed by surgical	5	4.1
Medical followed by surgical	7	5.8

Discussion

Ectopic pregnancy incidence has been on rise as per recent trends. Our study reported an incidence of 1/100 in Last 1 year in our centre. Out of 120 ectopics studied 7 were unmarried. So suspect of ectopic irrespective of marital status should be made. To make a diagnosis good clinical judgement, reliable TVS report, β -HCG, thorough history and examination should be done. Murray H et al⁽²⁾ in 2005 showed that increase in the availability and use of hormonal markers, coupled with advances in formal and emergency ultrasonography have changed the diagnostic approach to the patient in the emergency department with first-trimester bleeding or pain.

comparable to the sensitivity of extrauterine gestational sac with yolk sac and/or embryo on TVS in the prediction of definite tubal EP (sensitivity, 84.0%; specificity, 99.9%; PPV, 97.7%; NPV, 99.3% (P = 0.5) thus Blob and bagel signs seem to be the most common presentations of a tubal EP on TVS. Although they cannot be considered as a definitive sign of EP, their PPV is very high (> 95%); such women should therefore be considered at very high risk for having a tubal EP and should be treated as such.

Kostrzewa et al⁽⁴⁾ in 2013 compared women's fertility after surgical radical or conservative treatment of tubal ectopic pregnancy. A 24-month follow-up period revealed that the cumulative intrauterine pregnancy rate was higher in group salpingotomy as compared to group salpingectomy) i.e. 50% vs. 41.5%, respectively. Tubal EP returned in 13.6% vs 19.4%.

De bennot M et al⁽⁵⁾ in 2012 assessed the reproductive outcome after an ectopic pregnancy (EP) the 24-month cumulative rate of intrauterine pregnancy (IUP) was 67% after salpingectomy, 76% after salpingostomy, and 76% after medical treatment. IUP rate was lower after radical treatment compared with conservative treatments in univariable analysis. In multivariate analysis, IUP rate was significantly lower for patients >35 years old or with history of infertility or tubal disease. For them, IUP rate was significantly higher after conservative treatment compared with salpingectomy. The 2-year cumulative rate of recurrences was 18.5% after salpingostomy or salpingectomy and 25.5% after medical treatment. History of infertility or of previous live birth would be protective, in contrast to history of voluntary termination of pregnancy. Conservative strategy seems to be preferred, whenever possible, to preserve patients' fertility without increasing the risk of recurrence. The choice between conservative treatments does not rely on subsequent

fertility, but more likely on their own indications and therapeutic effectiveness. Risk factors of recurrence could be considered for secondary prevention.

Ranji GG et al⁽⁶⁾ in 2018 conducted a study to determine incidence, risk factors, symptoms, signs, type of ectopic pregnancy and management. The incidence of ectopic pregnancy was 2.81/100 deliveries. Ectopic pregnancy was common in 26-30 years, the minimum age at diagnosis was 18 years and maximum age was 40 years. Fourteen women had previous one ectopic pregnancy. Four had previous two ectopic pregnancies. Previous cesarean and treatment for infertility were the commonest risk factors. The classic triad was present in only 27.7% of patients. Fourteen patients presented with shock. Five women were diagnosed even before they missed their periods. Success rate of medical treatment with methotrexate is 83.33%. Tubal pregnancy was the commonest type, and ampulla was the commonest site. Right side was affected more than left side. Thirty-three patients (27.7%) required blood transfusion. Seven developed morbidity. After 1-year follow-up of 68 women who were desirous of fertility, five women have become pregnant subsequently with intrauterine gestation.

Conclusion

Though commonest at 20-30 years, never miss diagnosing ectopic even in extremes of ages and always look for associated risk factors. A good clinical judgement is very important to make a diagnosis till β -HCG report is awaited and patient is stable. Selection of appropriate management is very important especially in primigravida patients who favour medical treatment over surgical treatment. Patient selection and adequate follow up is very important in such cases.

References

1. Scorge, Schaffer, Halvorson LM et al. Williams gynaecology, chapter 7: ectopic pregnancy, 1st ed. McGraw Hill companies. 2008. <http://accessmedicine.mhmedical.com/content.aspx?bookid=1758&ionid=118168057>.
2. Murray H, Baakdah H, Bardell T, Tulandi T. Diagnosis and treatment of ectopic pregnancy. *Cmaj*. 2005 Oct 11;173(8):905-12.
3. Nadim B, Infante F, Lu C, Sathasivam N, Condous G. Morphological ultrasound types known as 'blob' and 'bagel' signs should be reclassified from suggesting probable to indicating definite tubal ectopic pregnancy. *Ultrasound in Obstetrics & Gynecology*. 2018 Apr;51(4):543-9.
4. Kostrzewa M, Żyła M, Kolasa-Zwierzchowska D, Szpakowski A, Stachowiak G, Szpakowski M, Wilczyński JR, Litwińska E. Salpingotomy vs salpingectomy—a comparison of women's fertility after surgical treatment of tubal ectopic pregnancy during a 24-month follow-up study. *Ginekologia polska*. 2013;84(12).
5. de Bennetot M, Rabischong B, Aublet-Cuvelier B, Belard F, Fernandez H, Bouyer J, Canis M, Pouly JL. Fertility after tubal ectopic pregnancy: results of a population-based study. *Fertility and sterility*. 2012 Nov 1;98(5):1271-6.
6. Ranji GG, Rani GU, Varshini S. Ectopic Pregnancy: Risk Factors, Clinical Presentation and Management. *The Journal of Obstetrics and Gynecology of India*. 2018 Dec 1;68(6):487-92.