



## SURGICAL INTERVENTION IN ECTOPIC PREGNANCIES.

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**Article received on:**

29/08/2017

**Accepted for publication:**

23/02/2019

**Received after proof reading:**

22/05/2019

**ABSTRACT:** To find out the negative laparoscopy rate for suspected ectopic pregnancy. **Study Design:** Retrospective cohort study. **Setting:** Electronic medical record databases in North Cumbria University Hospital, Carlisle, United Kingdom. **Period:** August 2014 to August 2018. **Materials and Methods:** The data of total 150 laparoscopies performed for ectopic pregnancy management was collected for gestational age at presentation, symptoms, serial beta human chorionic gonadotrophic hormone (HCG) levels, ultrasound findings, time interval for diagnosis, time to surgery and histology. **Results:** One hundred and fifty patients (52 under 5 weeks and 98 over 5 weeks' gestation) were incorporated into this study. The primary presenting symptoms were pain and vaginal bleeding. Suboptimal rise in serial beta HCG (performed 48 hours apart) was seen in 69 patients (46%) while other 81 patients (54%) had confirmed ectopic on USS and were offered surgical management after the scan. One hundred forty for women (96%) went for surgical management and one patient had conservative management as she was asymptomatic with low HCG (less than 1000IU) at the first visit and rapid drop in serial BHG results. Fifty three women (35%) had surgery on the same day when they had ectopic pregnancies seen on USS, 63 (42%) went to theatre for surgery between 0-6 days, while 34 patients (23%) had surgery between 7-14 days of USS. All women were operated through laparoscopic route and tubal ectopic pregnancies were confirmed at laparoscopy. There was no negative laparoscopy in our study period. **Conclusion:** Judicious and timely surgical intervention made it possible to treat every case through laparoscopic route with zero negative laparoscopy rate.

**Key words:** Ectopic Pregnancy, Transurgical Ultrasound HCG, Laproscopy, Laparotomy.

**Article Citation:** Memon FR, Poothavelil M, Memon S. Surgical intervention in ectopic pregnancies. Professional Med J 2019; 26(6):889-891.

DOI: 10.29309/TPMJ/2019.26.05.3587

### INTRODUCTION

The incidence of ectopic pregnancy is 11 in 1000.<sup>1</sup> Approximately 3% of all pregnancies in women attending Early Pregnancy Assessment Unit (EPAU) are ectopic pregnancies.<sup>2,3</sup> Lamentably, ladies still die from ectopic pregnancy, be that as it may, the case casualty rate has diminished over late years, recommending that early diagnosis and treatment may have had an effect.<sup>1</sup> Laparoscopy is not the 'best quality level' indicative test as a 3-4% false negative has been accounted for.<sup>4,5</sup> Surgery should only be performed when surgical intervention is indicated as it exposes the patient to unnecessary surgical intervention. The majority of tubal ectopic pregnancies ought to be diagnosed on transvaginal ultrasound. Transvaginal ultrasound has detailed sensitivities

of 87.0-99.0% and specificities of 94.0-99.9% for the diagnosis of ectopic pregnancy.<sup>2,6-9</sup> Laparoscopy is no longer the best quality level for conclusion. False-negative laparoscopies (3.0-4.5%) have been accounted for when the methodology is performed too soon in the diagnosis of an ectopic pregnancy.<sup>4,5</sup> This study was conducted to detect the negative laparoscopy rate for suspected ectopic pregnancy in our hospital and to investigate explanations behind negative laparoscopy in individual cases to think about our clinical practice.

### MATERIAL AND METHODS

This retrospective cohort study was conducted in North Cumbria University Hospital, a district hospital based in Carlisle United Kingdom.

Electronic medical record databases were searched for Patient's details from August 2014 To August 2018. The data was collected for gestational age at presentation, symptoms, serial beta human chorionic gonadotrophic hormone (HCG) levels, ultrasound findings, time interval for diagnosis, time to surgery and histology. Total 150 laparoscopies were performed for ectopic pregnancy management. Inclusion criteria were positive pregnancy test, abdominal pain and no intrauterine gestational sac.

## RESULTS

One hundred and fifty (150) patients were incorporated into this study. Fifty two ladies (35%) presented at under 5 weeks of pregnancy, Ninety eight (65%) were over 5 weeks gestation. The primary presenting symptoms were pain 138 (92%), vaginal bleeding 75 (50%), and left shoulder tip pain 6 (3.8%). Serum BHCG at first visit was under 1000IU in 72 (48%) ladies, more than 1000IU in 77(52%) ladies and in one patient no HCG was performed. Transabdominal (TAS) and transvaginal (TVS) ultrasound (USS) was performed in 135 women. USS findings showed extra uterine gestational sac with yolk sac and CRL in 36 women (24%), adnexal mass with a hyperechoic ring in six woman (4%), and homogenous adnexal mass separate to ovary (36%) and in 54 patients (36%) pregnancy of unknown location (PUL) was diagnosed. Suboptimal rise in serial beta HCG (performed 48 hours apart) was seen in 69 patients (46%) while other 81 patients (54%) had confirmed ectopic on USS and were offered surgical management after the scan. One hundred forty fore women (96%) went for surgical management and six patient had conservative management as she was asymptomatic with low HCG (less than 1000IU) at the first visit and rapid drop in serial BHG results. Fifty three women (35%) had surgery on the same day when they had ectopic pregnancies seen on USS, 63 (42%) went to theatre for surgery between 0-6 days, while 34 patients (23%) had surgery between 7-14 days of USS. All women were operated through laparoscopic route and tubal ectopic pregnancies were confirmed at laparoscopy. There was no negative laparoscopy in our study period.

## DISCUSSION

Our study demonstrated great get of ectopic pregnancies at first ultrasound check, 64% of ladies, which is somewhat lower when with different reviews in the writing as Kirk et al.<sup>2</sup> detailed that 75% of tubal pregnancies were noticeable in the primary transvaginal ultrasound examination. However, in half of the situations where diagnosis was not confirmed, had beta HCG under 1000IU, which is again clarified in the literature as some of these ectopic pregnancies are too little and too soon in the gestation period to be pictured on the ultrasound examination.<sup>10</sup> USS findings demonstrated additional uterine gestational sac with yolk sac and CRL in 6 ladies (24%), which is practically same as said in different reviews by Marvelos et al,<sup>3</sup> Condous et al<sup>6</sup> and Kirk et al<sup>11</sup> which specified that an additional uterine gestational sac containing a yolk sac as well as foetus that might possibly have heart beat will be seen in around 15–20% of cases. The majority of the patients were treated by laparoscopic course and tubal pregnancies were even confirmed in those cases where finding was not affirmed pre operatively. Laparoscopy is desirable over laparotomy because of its many advantages, for example, shorter operation time, less intraoperative blood loss, shorter hospital stay, bring down cost, bring down pain relieving necessities and less adhesionformation.<sup>12,13,14</sup> Women were discharged from hospital in 24 hours post surgery. None of the case had negative laparoscopy. The cases with PUL were additionally taken for surgery in perspective of side effects of pain and suboptimal ascent or drop of HCG. Surgical intervention in auspicious way maintained a strategic distance from laparotomy as patients were stable at the time of surgery. Medical management with methotrexate was not offered to any of the patients in perspective of abdominal pain.

## CONCLUSION

Our study demonstrated that judicious and timely surgical intervention made it possible to treat every case through laparoscopic route with zero negative laparoscopy rate. Open surgical method was avoided resulting in less morbidity and shorter hospital stay of the patients. There was



slight postponement amongst USS and surgery in under quarter of cases and that was because of low HCG at the primary visit and they had serial HCGs for one to two weeks.

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