

A quality improvement project to standardise care for women with pregnancy of unknown location in Croydon University Hospital using the M6 prediction model

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Background: A new prediction model to stratify the risk of patients with a pregnancy of unknown location (PUL), having high risk outcomes ie ectopics (EP) or persistent PUL vs low risk outcomes such as failing PUL (FPUL) or intrauterine pregnancy (IUP) has been developed and tested in two large multicentre studies. In our Early Pregnancy Unit, patients are currently managed according to NICE and RCOG guidelines with individualised care plans for patients with PUL. A pilot study was tested in our unit using this model for a trial period of 1 month to see if we could safely use this model to risk assess our patients and standardise care.

Methods: All women who had an outcome of PUL at their initial scan were triaged in a 2-step protocol including the M6 model as proposed by Bodiwala et al. Staff in the early pregnancy unit were trained to use the M6 Model and to record the data and follow-up patients accordingly. Data was collected and analysed using Excel and electronic patient records and reviewed by 2 registrars.

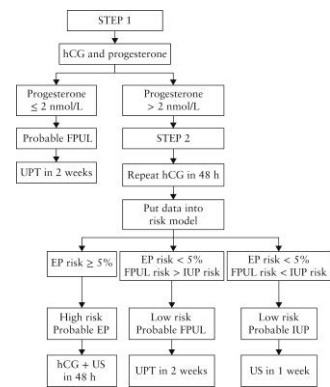
Results:

Total number of patients classified as PUL in 1 calendar month = 29

After step 1 - 7 patients were suitable for immediate discharge with urine pregnancy test (UPT) in 2 weeks for follow-up (FU)
4/7 patients – (57%) were correctly discharged at this step

1 patient was admitted to ward for N&V and therefore treated outside the protocol
2 patients had repeat bloods (48hr HCG) although these were not required

Figure 1: 2 stage triage protocol including M6 model (Bodiwala et al, 2019)



Results

22/29 patients proceeded to stage 2 in the trial (M6 model)

10 flagged as high risk for ectopic pregnancy (EP)
4 diagnosed EP (40%)

Out of these 4 – all had 2 scans to diagnosis
2 required surgical management (1 rupture)
2 had medical management

Other Outcomes (n=18)

- 8 IUP
- 6 Miscarriage
- 3 loss to follow up
- 1 FPUL

Conclusions & Discussion

- Almost 25% of patients could be safely discharged after initial presentation
- ALL high risk patients were correctly predicted
- NO high risk patients in the low risk group
- Reduced follow-up visits compared with previous month and up to 60% reduction in blood tests compared with usual care.
- Good feedback from EPU staff in using this model
- Potential cost-saving

However we had 1 case of rupture in the EP group by time of surgery (Patient had not complied with FU time frames given and presented later to the EPU as an emergency. We also had 3 cases of 'loss to follow-up' in the group therefore, our unit must be cautious in ensuring the patients selected for this follow-up are willing to comply, understand the risks and able to attend the follow-up appointments timely.

Further Recommendations:

Flag on Cerner/electronic records if patient is high risk in case of patient presentation to A&E/ Out-of-hours.
New leaflet for patients developed
Ongoing audit and review of local guideline to incorporate the above protocol.

