

Outcomes of Expectant, Medical and Surgical Management of Pregnancy of Unknown Location: Experience of a Single Tertiary Centre

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Introduction

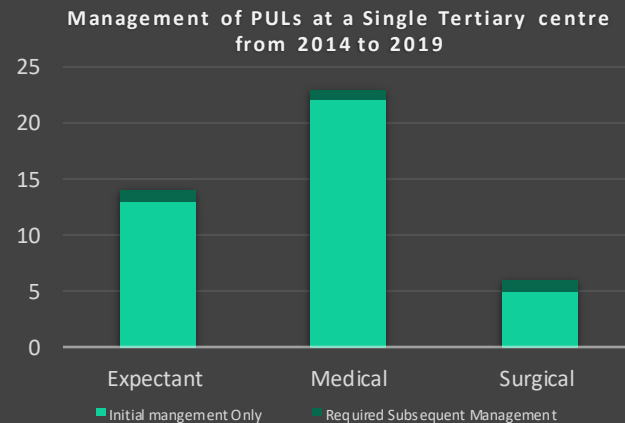
By definition, a pregnancy of unknown location (PUL) is a clinical situation with a positive Beta-hCG test, but no features of pregnancy or retained products are visible on ultrasound. Up to 17% of pregnancies of unknown location (PUL) are later identified as ectopic pregnancies (EP).¹ The optimal management of these cases remains controversial, especially for PUL with a beta-hCG level above 1500, described as the discriminatory zone for expected ultrasound identification of viability of pregnancy.² Beta-hCG values above this range with no features of a viable pregnancy seen on ultrasound are highly suspicious for a non-viable intrauterine pregnancy or EP.²

Method

We performed a retrospective cohort study on all women presenting with PULs at a South Australia tertiary hospital between January 2014 and December 2019. The patient characteristics, clinical features, management, outcomes and complications were identified.

Results

- Forty-three patients were diagnosed with PUL from 2014 to 2019
- Average gestation at diagnosis of 6 weeks
- 14 patients (33%) were managed expectantly, with 1 required subsequent treatment with methotrexate and laparoscopy
- 23 patients (53%) had medical management (methotrexate), with 1 case requiring subsequent surgical management
- 6 patients (14%) underwent surgical management (diagnostic laparoscopy +/- uterine curettage), 1 case required post-operative methotrexate for persistently elevated beta-hCG



- For the 13 case with peak beta-hCG level >1500: 2 were managed expectantly, 8 had medical management, and 3 underwent surgical management
- All cases managed surgically had histology confirming failed intrauterine pregnancy, despite unclear features on ultrasound
- The average time to a negative beta-hCG was 5 weeks
- 7 of the 13 cases have had a subsequent liveborn pregnancy

Table 1: PULs with Peak Beta-HCG >1500 at a Single Tertiary Centre from 2014 to 2019

Case number	Peak Beta HCG	Approx Gestation at Peak Beta hCG	Management	Time Till Negative Beta hCG (weeks)	Known Subsequent Pregnancy
1	2232	4+4	Medical	5	Yes
2	3491	5+0	Medical	4	No
3	1700	6+6	Medical	8	Yes
4	4306	13+0	Medical	4	Yes
5	2228	6+0	Medical	4*	No
6	4975	5+6	Medical	4	Yes
7	5649	7+5	Surgical	6	No
8	4970	9	Surgical	3	Yes
9	29715	6	Surgical	Unknown	Yes
10	1983	3	Medical	4	No
11	2686	7	Medical	4	Yes
12	6800	7+4	Expectant	6	No
13	3116	5	Expectant	8	No

Conclusion

Expectant, medical and surgical management had no significant difference in outcomes. Medical management can be appropriate even with a peak hCG level of more than 1500.

References:

1. Fistouris, J., Bergh, C., & Strandell, A. (2016). Classification of pregnancies of unknown location according to four different hCG-based protocols. *Human Reproduction*, 31(10), 2203-2211. <https://doi.org/10.1093/humrep/dew202>
2. Pereira, P., Cabar, F., Gomez, Ú., & Francisco, R. (2019). Pregnancy of unknown location. *Clinics*, 74. <https://doi.org/10.6061/clinics/2019/e1111>

