

## Abstract

### Serum Progesterone Level in Predicting Ectopic Pregnancy

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#### Objective:

This study was to evaluate the level of serum progesterone in predicting ectopic pregnancy.

#### Methods:

A prospective observational study was conducted at UKMMC within six months (1<sup>st</sup> April 2012 to 30<sup>th</sup> September 2012). All pregnant women before 13 weeks who had symptoms of pervaginal bleeding and abdominal pain were included in this study. Samples of blood were taken to determine the correlation between the level of serum progesterone and the immediate pregnancy outcomes including ectopic pregnancy.

#### Results:

About 62 patients were recruited in this study. Majority (64.5%) of the patients were Malays, followed by Chinese (14.5%), Indians (9.7%) and other races (11.3%). Most (61.3%) of them were multiparae, 37.1% were primigravidae and 1.6% were grandmultiparae. From 62 patients, 37 (59.7%) women had ectopic pregnancies, 14 (22.6%) women had viable intrauterine pregnancy and 11 (17.7%) were non-viable intrauterine pregnancy. The mean level of serum progesterone in ectopic pregnancy was 15.4ng/l. The cut off points of 15.4ng/ml was used to diagnose ectopic pregnancy with 83.7% sensitivity and 56.0% specificity. Mean level of progesterone in non viable intrauterine pregnancy was 10.6ng/ml which was lower than the level for ectopic pregnancy. However in ectopic pregnancy, the mean level of serum BhCG was more than 1000 iu/ml as compared to less than 1000 iu/ml in non -viable intrauterine pregnancy.

#### Conclusion:

A single serum progesterone level was not effective to differentiate between an ectopic pregnancy and a non-viable intrauterine pregnancy as the levels for both were not much different (below 15.4ng/ml). However, with the combination of serum progesterone and BhCG, the prediction of an ectopic pregnancy can be made effectively by using biochemical markers.