**Background:** The beta-hCG concentration in a normal intrauterine pregnancy rises in a curvilinear fashion until 41 days of gestation at which time it plateaus at approximately 100,000 IU/L & the mean doubling time for the hormone is from 1.4 to 2.1 days.

**Aim of study:** To determine whether serial quantitative serum hCG levels obtained 48-72 hours apart are reliable predictors of pregnancy outcome.

**Subjects & Methods:** A prospective study was done at Babylon hospital for Maternity & Children & private clinic from the period of April 2010 to September 2011 & involved 50 pregnant women in first 6-8 weeks of gestation presented with vaginal bleeding in current pregnancy or abortion in previous pregnancy. Women more than 6-8 weeks of gestation & those with multiple pregnancies were excluded from the study. The level of B-hCG was estimated by a paired blood samples collected 48-72 hours apart. An automated quantitative measurement of B-hCG in the serum was done by VIDAS instrument using ELFA technique (Enzyme linked Fluorescent ASSAY).

**Results:** A total of 50 pregnant women in first 6-8 weeks of pregnancy were followed up by serial B-hCG 2-3 days apart. 11 women out of 50 (22%) terminate as spontaneous abortion; 39 women out of 50 (78%) had term pregnancy. Mean age was 26.84 years, mean gravida was 3.08, and mean parity was 0.7. The mean gestational age was 5 weeks +1.3 days. Mean hCG at presentation was 8926.5 miu/ml, & after 2-3 days was 16267.39 miu/ml.

8 women out of 11 (72%) had decline in B-hCG after 2-3 days which is statistically significant (p<0.001).

While none of women with term pregnancies showed decline in B-hCG after 2-3 days.

37 out of 39 women (94%) with term pregnancy had increment more than 60% in B-hCG after 2-3 days (statistically significant p less than 0.001).

**Conclusions:**
1. Serial quantitative serum hCG 48-72 hours apart provides useful predictors of pregnancy outcome in the first 6-8 weeks of gestation.
2. A single B hCG reading is not predictive regarding the prognosis of pregnancy compared with double readings.