

Prenatal Genetics, Reproductive Genetics

AB116. Estimating the effectiveness of free β -hCG and PAPP-A in first trimester dried blood spot verses fresh serum

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Background: The objective of the study was to determine the effectiveness of dual assay pregnancy associated plasma protein A and free β - subunit of human chorionic gonadotropin (PAPP-A & Free β -hCG) using Auto DELFIA, in Dried blood spot (DBS) corresponding with serum.

Methods: A total of 140 pregnant women who attended the antenatal clinic of Obstetrics and Gynecology in the Lok Nayak Hospital, New Delhi, India were screened for First

trimester screening. DBS as well as blood were collected by venipuncture and finger prick for dual assay and the concentrations were measured by Auto DELFIAR (Perkin Elmer, Turku, Finland).

Results: In our study, all the samples were analyzed for dual analytes in DBS as well as serum. Free β -hCG concentration in Dried Blood Spot were consistently higher than serum with coefficient co-relation R-0.641 while there was no significant difference between DBS and serum assay for PAPP-A as the coefficient co-relation was R-0.55.

Conclusions: The correlation coefficient for both markers indicate that DBS from finger prick can be used reliably in prenatal screening as it is cost effective and minimally invasive alternative for venipuncture serum.

Keywords: First trimester; dried blood spot (DBS); Down syndrome; PAPP-A & free β -hCG

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