Evaluation of Gestational Sac Diameter, Crown Rump Length, Yolk Sac Diameter and Fetal Heart Rate in Early Detection of Congenital Fetal Malformation

Abstract

Congenital abnormalities impact 3% to 5% of all pregnancies, and they are the leading cause of newborn death. The majority are caused by unknown factors, with pregnancy being the sole risk factor. However, in both affluent and developing nations, they are responsible for rising newborn fatalities.

Aim of the study:

The purpose of this study was to see whether there was a link between Gestational sac diameter, crown rump length, yolk sac diameter and fetal heart rate in detection of early congenital fetal malformation.

Patients and methods:

our research included 100 pregnant women who were scanned using 2D ultrasonography beginning in the first trimester, with the first scan taking place between 6 and 8 weeks. at 18-22 weeks, a followup scan was performed. the first trimester's outcome was documented.

Results:

Among cases, 77 (77%) had a normal pregnancy, 20 (20%) had an early miscarriage, 3 (3%) had congenital fetal malformation. a statistically highly significant difference between a normal, early miscarriage and congenital fetal malformation results of scan regarding yolk sac shape ($p < 0.001$). in our research, a small, irregular, calcified, or big yolk sac was a significant predictive factor in pregnancy outcome.

Conclusion:

there was a strong link between gestational sac diameter, yolk sac shape and diameter, CRL, and fetal heart rate in pregnancies that ended in a normal first trimester.