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Objective

Elevated maternal serum alpha-fetoprotein (AFP) levels have been linked to various fetal anomalies. Therefore, targeted ultrasound scans to detect such anomalies are frequently recommended. This study was conducted to assess the added value of additional targeted ultrasound scans in pregnant women with elevated AFP levels who already underwent a routine fetal anatomy scans.

Methods

A retrospective cohort study was conducted at Soroka University Medical Center. Pregnant women with elevated AFP levels in the second trimester, who have undergone routine fetal anatomy scans, were included. The study assessed whether additional targeted scans at a tertiary hospital ultrasound unit provided significant additional diagnostic information.

Results

The study included 151 women, with a median maternal age of 30 years. All women underwent additional targeted scan in our tertiary institution. 93.4% had a normal scan, 9 scans (6%) showed findings not associated with AFP and not previously diagnosed, and one patient had a finding associated with elevated AFP (Chorioangioma).

New findings diagnosed during targeted scan

- Chorioangioma
- Septo-Optic dysplasia
- Umbilical cord varix – 2 cases
- Persistent right umbilical vein
- Left renal Duplication
- Hypospadias
- Echogenic bowel
- Short long bones – 2 cases

Conclusion

The findings of this study suggest that targeted ultrasound scans in cases of second trimester elevated AFP may have limited added value in those who have previously normal routine anatomy scans. Therefore, an additional targeted scan may be considered for selected cases and not routinely advised. However, findings unrelated to elevated AFP were observed, supporting the trend towards an additional third trimester routine anatomy scan.