

EP05.09 Feasibility of visualization of the pancreas during first-trimester prenatal ultrasound examinations in fetuses

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Objectives: Embryological studies show that the fetal pancreas forms by the fifth week of gestation, reaching 5–10 mm by the end of the first trimester. This study aimed to determine the percentage of cases in which the pancreas can be visualized in fetuses at this stage, based on gestational week.

Methods: The study enrolled 73 patients with singleton pregnancies undergoing first-trimester prenatal ultrasound. It was a cross-sectional study, including all women presenting within a set timeframe. Demographic data (BMI, probe-to-amniotic fluid distance [PAD]) and the proportion of fetuses with visible pancreases were recorded. A Voluson E22 Expert ultrasound with a Convex C2-9-D (3–9 MHz) transducer was used by two experienced ultrasonographers (>5 years in first-trimester scans).

Results: Median gestational age was 12 weeks + 4 days. Visualization failed in 30% of fetuses (22 cases). Table 1 shows failure rates by week. Fetuses with non-visualized pancreases were younger (11+3 vs. 13+1, p=0.03). Maternal BMI showed no significant difference (26.6 vs. 24.2 kg/m2), though it neared significance. PAD was significantly greater in the failure group (57 vs. 42 mm, p<0.05).

Conclusions: The pancreas is visualizable and measurable in 70% of first-trimester fetuses. Success varies with gestational age and PAD, with younger fetuses and greater PAD linked to higher failure rates.

TABLE:
Visualization success by gestational week.

pregnancy weeks	number of cases	Failures (n,%)
11	14	7 (50%)
12	26	9 (34%)
13	23	6 (26%)