

EP 13.12 Placental area and weight description in monochorionic twin pregnancies with selective intrauterine growth restriction type I and II

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Objective

Describe placental areas and weights in patients with monochorionic twin pregnancies with selective intrauterine growth restriction (sFGR) type I and type II.

Methods

Data were collected from 2017 to 2024 using electronic medical records from the "National Institute of Perinatology." The data were analyzed using REDCap. Monochorionic with sFGR with color-dye injection placentas. That were weighed and classified by the pathology department. Image J was used to calculate the placental disc area using digital photographs. Fig.1

Results

Total of 47 patients were included, with a mean age of 28.6 years. Chorionicity/amnionicity were classified: monochorionic/diamniotic (n=44, 93.6%), monochorionic/monoamniotic (n=1, 2.1%), and monochorionic/diamniotic triplet (n=2, 4.3%). Categorized: Type I (n=37, 78.7%) and Type II (n=10, 21.3%). Type I, the difference in the mean placental area percentage was 19.86% (SD $\pm$ 17.95). The difference in the mean birth weight percentage was 10.44% (SD $\pm$ 7.54). Placental weight percentiles relative to gestational age were classified: <P10 = Hypotrophic (n=5, 13.5%), P25=Small (n=10, 27.0%), P25-P75 = Eutrophic (n=18, 48.6%), P75-P90 = Large (n=3, 8.1%), >P90 = Hypertrophic (n=1, 2.7%). Type II, the difference in the mean placental area percentage was 34.39% (SD $\pm$ 19.93). The difference in the mean birth weight percentage was 19.55% (SD $\pm$ 10.62). The placental weight percentiles classified: <P10 = Hypotrophic (n=2, 20.0%), P25 = Small (n=6, 60.0%), P25-P75 = Eutrophic (n=1, 10.0%), P75-P90 = Large (n=0, 0.0%), >P90 = Hypertrophic (n=1, 10.0%).

Conclusions

The placental area of growth-restricted fetuses is smaller than that of non-growth-restricted. The percentage difference in placental area is greater in type II than in type I. The same in the difference in birthweight between twins and in the percentage of birth weight discordance. However, in type I, eutrophic placentas predominate, whereas in type. II, the placentas are classified as small for gestational age.

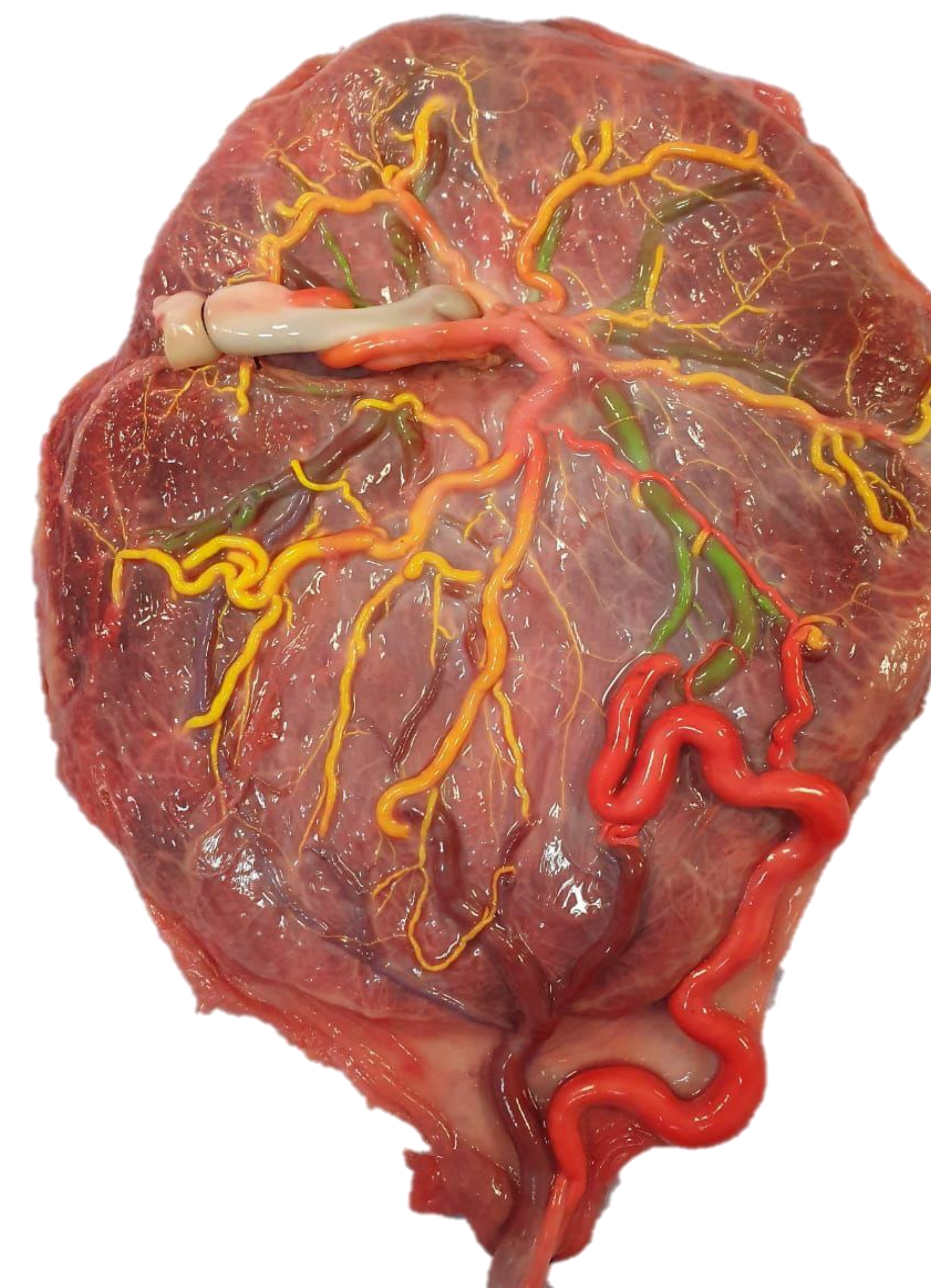


Fig. 1. Placental areas selective fetal growth restriction