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The objective of this study was to evaluate fetal well-being in extremely severe intrauterine growth-restricted fetuses with abnormal umbilical blood flow. We reviewed 13 cases of extremely severe growth restriction fetuses with abnormal umbilical blood flow that were treated from 1991 to 1996 in our department. These cases were divided into two groups: good prognosis group (n=7) and poor prognosis group (n=6). Mean gestational age at the first determination of abnormal umbilical blood flow was 28 weeks 2 days and 25 weeks 2 days in good and poor prognosis group, respectively. Mean estimated fetal body weights at that time were 570g (-4.4SD) and 431g (-3.8SD) in good and poor prognosis group, respectively. A good prognosis was expected in cases with biophysical profile score of six points or more. The prognosis was poor in cases in which the biophysical profile score was four points or less and decreased from six points. In the good prognosis group, the degree of growth restriction did not progress and the estimated fetal body weight increased. In the poor prognosis group, there was little increase in estimated fetal body weight, and the degree of growth restriction progressed further. [Conclusion] Fetal well-being should be evaluated systematically by not only umbilical artery doppler flow velocity but also biophysical score alteration and fetal growth.