

題名:Oligohydramnios Decreases Platelet-Derived Growth Factor Expression in Fetal Rat Lungs.

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摘要:To evaluate the effects of experimental oligohydramnios on lung growth, expression of platelet-derived growth factor (PDGF) and its receptors, and lung morphology in fetal rats. METHODS: On day 16 of gestation, we anesthetized timed pregnant Sprague-Dawley dams and punctured uterine wall and fetal membranes of each uterine sac which resulted in oligohydramnios. The fetuses in the opposite uterine horn served as controls. On days 19 and 21 of gestation, the fetuses were delivered by cesarean section and weighed, and the lungs were dissected free and weighed. RESULTS: Rats exposed to oligohydramnios exhibited significantly lower lung/body weight ratios on days 19 and 21 of gestation and significantly lower radial saccular counts on day 21 of gestation than did the control rats. Lung PDGF-A and PDGF-B gene and protein expression and elastin level were significantly decreased in rats exposed to oligohydramnios on days 19 and 21 of gestation. The PDGF receptor alpha and beta gene expression levels were significantly decreased in rats exposed to oligohydramnios on day 19 of gestation. CONCLUSION: A decreased PDGF expression may be important in the pathogenesis of oligohydramnios-induced pulmonary hypoplasia and suggests that supplementation may provide useful therapeutic strategies. Copyright (c) 2007 S. Karger AG, Basel.