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Next Article

Abstract

REVIEW

Placental Anomalies in Children with Infantile Hemangioma

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Abstract

Abstract: Evaluation of the placenta provides some important insights into pathophysiologic changes that take place during the prenatal and intrapartum process. We investigated the pathogenic significance of placental features and their relationship to the development of infantile hemangioma in order to obtain a better understanding of its cause. Placental specimens were reviewed from 26 singleton pregnancies of women whose offspring weighed less than 1500 g. A group of 13 neonates who developed infantile hemangioma in the immediate neonate period were compared with 13 healthy preterm infants of comparable postconception age who had no infantile hemangioma. Pathologic placental changes were analyzed in both groups. Gross lesions with disturbance of the utero-placental circulation were found in all placentas from children who developed infantile hemangioma, including massive retroplacental hematoma in two infants, extensive ischemic infarction in seven, and large dilated vascular communications, severe vasculitis, chorioamnionitis and funiculitis in four. Placental features included percentages greater than 25% of avascular villi, platelet and fibrin aggregates, and multifocal disease involving more than one histologic section. Examination of 13 placentas of low-birth-weight infants without infantile hemangioma only showed abnormal placentation in one and isolated villous immaturity in two. The higher ratio of placental pathologic findings in patients with infantile hemangioma suggests that reduced placental oxygen diffusive conductance contributes to fetal hypoxic stress and that hypoxic/ischemic changes in the placenta could be related to

infantile hemangioma development via vascular endothelial growth factor and placental growth factor expression, among others, within the villous vessels and trophoblasts.