Aetiology of left-sided gastroschisis

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Sir,

In reference to the article "Hombalkar NN, Rafe A, Prakash GD. Left-sided gastroschisis with caecal agenesis: A rare case report. Afr J Pediatr Surg 2015;12:74-75", we would like to congratulate the authors for highlighting this rare anomaly. We have previously reported a similar case of left sided gastroschisis with review of the literature.[1]

We would like to highlight the etiological mechanism, which would result in a left sided defect. The aetiology for left-sided gastroschisis is unknown, and the theories, which have been proposed previously had only been able to account for the majority of defects, which occur on the right. The early regression of the left umbilical vein may explain the pathogenesis of left-sided gastroschisis. An alternative hypothesis is one that reconciles a disorder of right-left axis orientation as the primary abnormality in morphogenesis.[2,3]

Feldkamp *et al*.[3] have recently proposed a theory that gastroschisis resulted from failure of one or more folds, which were responsible for wall closure and that a right-sided defect predominated because the yolk stalk was positioned on the right, as the connecting stalk and yolk stalk merged. They proposed that slight malpositioning of the yolk stalk to the left of the midline in the setting of wall fold failure could lead to left-sided defects. This theory was appealing because it explained both right-and left-sided gastroschisis. Torfs *et al*.[4] reported that polymorphisms of several genes, which represented enzymes, which involved in angiogenesis, blood vessel integrity, inflammation, wound repair, and dermal or epidermal strength, along with maternal smoking, were associated with the development of gastroschisis. This work supported the concept of a multifactorial aetiology of gastroschisis, which involves both genetic issues and environmental factors. These factors may be better understood when more becomes known about the role of genes and influence of hormones in the causation of the defect. Identifying and reporting these unusual cases is essential to further expand our understanding of these conditions and their potential associations.

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