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Outcome of infants presenting rectal bleeding: A retrospective study in a single institution

(新生児期および乳児期における下部消化管出血の解析: 単一施設における後ろ向き検討)

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Abstract

Although rectal bleeding in infancy (RBI) is not a rare phenomenon, the clinical course of RBI is not fully understood.

To investigate the outcome and pathogenesis of RBI, especially when concomitant with food protein-induced proctocolitis (FPIP) and neonatal transient eosinophilic colitis (NTEC), 22 neonates with rectal bleeding with FPIP and NTEC from January 2008 to June 2012 were enrolled and their clinical course and mechanisms of inflammation were examined.

Thirteen infants showed rectal bleeding after feeding and were diagnosed with FPIP, and 9 infants showed rectal bleeding before feeding and were diagnosed with NTEC. Elevated peripheral white blood cell ( $12,685 \pm 3,754/\mu\text{l}$  and  $30,978 \pm 16,166/\mu\text{l}$ ) and eosinophil ( $1,084 \pm 816/\mu\text{l}$  and  $4,456 \pm 3,341/\mu\text{l}$ ) were confirmed in FPIP and NTEC, respectively. Colonoscopy revealed nodular lymphoid hyperplasia, a pale mucosal surface and oozing with diffuse infiltration of neutrophils, lymphocytes, and eosinophils in both groups. RT-PCR analysis revealed enhanced expression of the IL-6, CCL11, and CXCL13 genes, where CXCL13 expression was more prominent in FPIP. Mucosal infiltration by CD3<sup>+</sup> and IgA<sup>+</sup> but not IgE<sup>+</sup> cells was confirmed. Among them, only one infant with FPIP developed milk allergy, whereas none with NTEC had developed milk allergy at the age of 1 year.

FPIP in infancy and NTEC are similar diseases and that IL-6, CCL11, and CXCL13 may play a major role in the pathogenesis of rectal bleeding. Although the involvement of allergic reaction is possible, milk allergy was not a common outcome after 1 year of follow-up.