

POSTER PRESENTATION

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Granuloma-in-follicles in pediatric Crohn's disease

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Background

SNPs in NOD2 are a major susceptibility factor for Crohn's disease (CD). (Sub)mucosal granulomas are a diagnostic feature of CD.

Aim

To better describe morphological and immunohistochemical features of pediatric CD (pCD) granulomas.

Methods

17 pCD patients with granulomas were genotyped for CD-associated mutations or polymorphisms in NOD2 and autophagy-related genes ATG1 and ATG16L1. Granulomas were found in intestinal biopsies of 22 out of 83 endoscopic and 9 out of 12 surgical procedures. Of each procedure we selected one biopsy per organ to study the cellular composition and cytokine profile of granulomas. We stained 43 paraffin-embedded, formalin-fixed pCD biopsies with hematoxylin&eosin and monoclonal antibodies targeting leukocyte markers (HLA-DR, CD68, CD4, CD8, CD20, IL23R) and cytokines (TNF α , IFN γ , IL6, IL10, IL17, TGF β) (Figure 1)

Morphology and immunohistochemistry were scored semi-quantitatively.

Results

In addition to small isolated (sub)mucosal granulomas, we found granulomas in the follicle(GIF) centre of mucosa-associated lymphoid tissue, visualized by CD20 staining (fig). GIF were found in half the number of procedures (more often in surgical than in endoscopic) in only 7 out of 17 pCD patients. Exceptional lymphocyte emperipolesis in multinucleated giant cells (MGCs) and IL-17 expression were observed, only in granulomas of pCD with GIF (fig). The granulomas of patients with GIF often had a lymphocytic corona, but polycyclic granuloma architecture was rare. No clear relation was seen between the presence of GIF and the CD-associated NOD2, ATG1 and ATG16L1 genotypes.

Conclusion

We defined GIF as a morphological characteristic in few selected pCD patients, and demonstrate association with

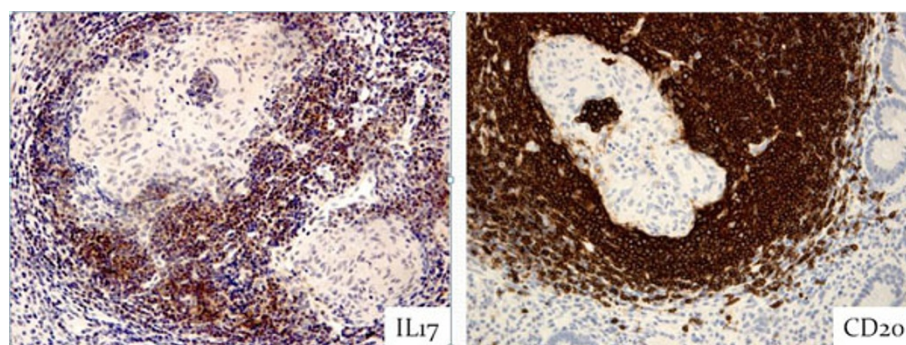


Figure 1

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emperipolesis of lymphocytes in MGCs and weak IL17 expression.

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