Indian J Gastroenterol (November–December 2011) 30(6):282–283
DOI 10.1007/s12664-011-0140-6

LETTER

The rectal tonsil in children: a reactive lymphoid proliferation that may mimic a lymphoma

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Published online: 20 October 2011

Prominent and localized lymphoid hyperplasia in the rectum is also known as rectal tonsil (RT) [1, 2]. When the reactive lymphoid infiltrate is very exuberant with atypical lymphoid cells it can be difficult to distinguish from lymphoma on histology [3]. To avoid overdiagnosis and overtreatment, immunophenotypic and genotypic studies are necessary [3–5].

A 4-year-old girl, without relevant medical antecedents, was referred to our department with rectal bleeding. The hemogram was normal. Rectal examination revealed a polypoid mass arising from posterior rectal wall. A pelvic MRI showed a 3 cm × 3 cm polypoid mass in the distal rectum without infiltration beyond the submucosa (Fig. 1a). Endoscopy revealed raised and nodular mucosa without ulceration arising from the posterior rectal wall (Fig. 1b). Two fragments were removed surgically to establish the correct diagnosis.

At histology, a dense lymphoid infiltrate was present in the lamina propria and submucosa; there were abundant macrophages inside the germinal follicles, atypical-appearing enlarged and mature lymphocytes with numerous mitotic figures and well-formed germinal centers of different size. Immunohistochemistry suggested follicular type of proliferation with B cells markers (CD20+, CD10 and bcl-6+). The germinals centers were bcl-2 negative.

Immunohistochemical staining for CD21 demonstrated a follicular pattern by delineating follicular dendritic cells. PCR studies helped to exclude a lymphoid malignancy because there was no evidence of monoclonal expansion of B cells. These studies confirmed a reactive lymphoid proliferation, and excluded lymphoma, and other forms of non-neoplastic lymphoid proliferation with intact follicles such as lymphoid follicular proctitis and lymphoid polyps of the rectum.

A normal-appearing rectal mucosa was seen during endoscopy 14 months later.

Histology and their inmunohistochemical and molecular studies help to differentiate benign condition from a malignant one [3–5].

The etiology of RT hyperplasia is unknown. Histologically RT hyperplasia may be distinguished from malignant lymphoma by the polymorphic nature of the infiltrate, absence of significant cytologic atypia and the presence of reactive follicles within the lesion. Mitotic figures are frequent in the germinal centers but absent in the surrounding lymphoid tissue. The lymphoid infiltrate usually is confined to the mucosa and the submucosa; the involvement of the muscularis mucosa is unlikely [2]. In contrast, lymphomas have an infiltrative growth pattern, an

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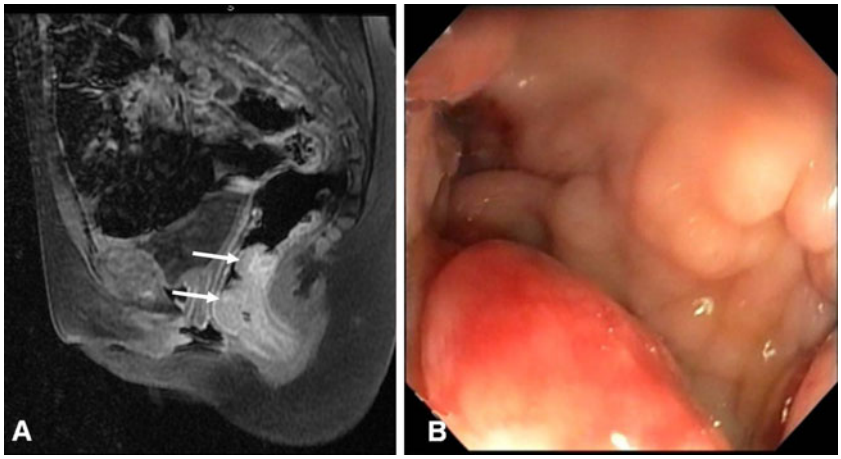

Fig. 1 **a** Sagittal fat-saturated T1-weighted image obtained after intravenous gadolinium contrast administration shows a lobulated mass (*arrows*) with heterogeneous enhancement growing from the posterior rectal wall, **b** Endoscopic image: Colonoscopic findings of the rectum showing densely present, numerous, small elevated lesions which extend from the lateral rectal wall to the posterior one

indistinct follicular architecture and immature lymphoblastic cells are scattered beyond the germinal centers and also infiltrate through the muscularis propria [2, 5].

In our patient, histological features suggesting a benign process, included the appearance of broad bands of collagen surrounding the lobules of lymphoid tissue, the presence of phagocitic macrophages inside the germinal follicles and the frequent occurrence of mitotic figures in well-developed mature lymphocytes. Also there was no phenotypic, molecular genetic or cytogenetic evidence of malignancy.

Our special acknowledgments to Javier Perez Losada

Conflict of interest None

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