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## Background

Calprotectin is a calcium-binding intracellular protein expressed in neutrophils. Faecal calprotectin is utilized as a non-invasive biomarker of intestinal inflammation. Elevated levels strongly indicate underlying inflammatory bowel disease (IBD) in children. The simplicity of the test enables monitoring of disease activity and response to treatment over time. Few other conditions than IBD has been associated with elevated faecal calprotectin and the indication of colonoscopy in children have therefore been questioned.

## Aim

To present three cases with elevated levels of faecal calprotectin associated with juvenile polyps.

## Conclusions

- Elevated levels of faecal calprotectin may indicate juvenile polyps in children.
- Examination with colonoscopy is still warranted in the pediatric population with elevated levels of faecal calprotectin.

## Patients and Methods

Three children who were referred to colonoscopy with suspected IBD due to frequent loose and bloody stool and elevated faecal calprotectin. Juvenile polyps were detected and extirpated in all three children. After polypectomy stools were normalized and faecal calprotectin reduced significantly in all three children.

Faecal calprotectin was analyzed with ELISA and levels >50 mg/kg was considered as a positive value. Standard colonoscopy with polypectomy was performed in sedation with propofol.

## Case 1

9-year-old girl with fresh blood in her stools and complaints of frequent abdominal pain during the past 6 months. Faecal calprotectin was 773 mg/kg and she was referred to endoscopy with suspicion of IBD. Colonic mucosa was normal, but a 2 x 3 x 3 cm large polyp with a 5 cm long stalk was detected in the proximal part of colon. The polyp was removed and histology showed an inflamed benign juvenile polyp (**Fig. 1**). Faecal calprotectin 3 months later was 98 mg/kg and the girl experienced relief of all symptoms.



## Case 2

4-year-old girl with episodes of bloody stools the past 12 months, positive faecal haemoglobin and iron deficiency. Faecal calprotectin was found elevated at 1945 mg/kg and she was referred to endoscopy with suspected colitis. Colonoscopy showed a macroscopically and microscopically normal mucosa, but a 1 x 1 x 1.5 cm large inflamed stalked polyp was detected and removed in the distal part of sigmoideum (**Fig. 2**). Histology confirmed a juvenile polyp. Faecal calprotectin 3 months later was 20 mg/kg and the girl was symptom-free.



## Case 3

3-year-old boy with frequent abdominal pain, loose and bloody stools since 18 months of age. Faecal calprotectin was 888 mg/kg and he was referred to colonoscopy with suspected distal colitis. Ileo-colonoscopy showed a macroscopically and histologically normal mucosa (**Fig. 3A-B**), but a 2 x 2 x 3 cm large stalked polyp was detected in the distal part of sigmoideum (**Fig. 3C-E**). The polyp was extirpated (**Fig. 3F-G**) and histology confirmed diagnosis of juvenile hyperplastic polyp (**Fig. 3H**). Faecal calprotectin 2 months after polyp removal was 52 mg/kg and the boy experienced relief of all symptoms.

