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COLONOSCOPIC POLYPECTOMY IN CHILDREN

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ABSTRACT

34 children aged 9 months to 12 years presenting with chronic and intermittent rectal bleeding were diagnosed as having colorectal polyps by fiberoptic colonoscopy performed under sedation. Bleeding per rectum (mean duration, 15 months) was the chief presenting symptom and was present in 97% of these patients. In 85% of patients polypectomy was carried out without using general anesthesia. 78% of patients had juvenile polyps and 22% had solitary adenomatous polyps. Two children had two polyps.The majority (33%) of the polyps were located in the rectosigmoid. Polypectomy was performed on all patients, and no case of massive bleeding, bacterial infection or perforation occurred post-operatively.

Therefore, it seems that colonoscopic snare polypectomy is an effective and safe procedure for the treatment of colorectal polyps in children.

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INTRODUCTION

Colonoscopic polypectomy is an established therapeutic modality for the treatment of colorectal polyps.[1,2] The first report on clinical experience in pediatric colonoscopic polypectomy was by Gans et al. in 1975.[3] Most of the reports consist of only a few patients.[3-7] The purpose of our study is to evaluate these procedures in infants and children and to recognize their limitations and proper techniques.

MATERIALS AND METHODS

34 children aged 9 months to 12 years underwent colonoscopic snare polypectomy during a three year period. The age and sex of the patients, duration and nature of symptoms, site and number of polyps seen and removed during colonoscopic examination and their histopathological diagnoses were recorded. Two children had two polyps removed.

Colon preparation in all patients was done by normal saline irrigation of the gut. Polypectomy was performed using an adult colonoscope (model CF-P20L Olympus Optical Co., Tokyo, Japan), Olympus electrosurgical unit and diathermy snare. General anesthesia was required in 15% of children aged ≤3 years. The remaining 85% of patients received diazepam 0.1 mg/kg for sedation. The procedure was carried out in the left lateral decubitus position. When a polyp was seen, it was snared and severed using a blended (cutting plus coagulating) current. The severed polyps were removed by the sucking tip of the colonoscope or by biopsy forceps.

Patients were observed in the hospital for at least 24 hours after the procedure. The polyps were removed by snare electrocautery, according to the method of Wolff and Shinya.[4] All patients were kept on a clear liquid diet for 24 hr after the procedure. Hematocrit levels were determined 6 hr and 18 hr after polypectomy.

RESULTS

During the study period, 36 polypectomies were performed on 34 children. The mean age of these patients was

Table I. Size and location of polyps

Diameter (cm)	Rectum n= 15	Sigmoid colon n= 15	Descending colon n= 4	Ascending colon n= 2
<1	5	3	1	0
1-2	7	11	3	2
>2	3	1	0	0

6.94 years. The most common symptom was bleeding per rectum, which was present in 97% of patients. The mean duration of bleeding was 15 months (ranging from2 weeks to 5 years). Five patients (15%) complained of colicky abdominal pain. The size and distribution of the resected colonic polyps are shown in Table I.

Twenty-eight of 36 polyps (78%) were classical juvenile polyps while eight (22%) were adenomatous polyps. There was no family history of polyps in any of these patients.

Clinical features of patients are presented in Table II.

Table II. Clinical features

Male	25
Female	9
Age (mean)	6.94(range 9 months to 12 years)
Hematocrit (mean)	39(range 36-45)
Symptoms:	
Bright red blood per rectum	33(97%)
Abdominal pain + rectal bleeding	5(15%)
Positive family history	-
Obstruction	-

Table III. Morphology and pathology of polyps

Total Polyps N= 36	Inflammatory N= 28	Pedunculated	24
		Sessile	4
	Adenomatous N= 8	Pedunculated	5
		Sessile	3

There were no major complications during or after colonoscopic examination and polypectomy. Only four patients developed minor bleeding following polypectomy. All four patients were managed conservatively and recovered well without the need for blood transfusion.

DISCUSSION

Colorectal polyps are one of the most common causes of rectal bleeding in children.[5]

Before the advent of fiberoptic endoscopy, the treatment of polyps located beyond the rectum and sigmoid colon was surgical. To date, there is no evidence of an increased risk of GI malignancy for patients with isolated juvenile polyps.[6]

However, with the advent of fiberoptic endoscopic equipment, colonoscopic polypectomy has become the treatment of choice for colonic polyps and has been used extensively in adults even as an outpatient procedure.[9,13] Most polyps in children are juvenile hamartomas, usually located in the rectum or sigmoid colon.[10,11]

The most common symptom in this series was rectal bleeding. Many other studies have also noted this symptom as being the most common.[12] The results of this study as well as that of others demonstrate and confirm that colonoscopic polypectomy can be safely performed in children, and that the adult colonoscope can be safely used in children above 2 years of age.[14]

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