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JUVENILE POLYPS OF THE COLON AND RECTUM*

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The juvenile polyp, also known as the mucous or retention polyp should not be classified clinically as a neoplasm since it is in reality probably a hamartoma or an inflammatory polypoid retention cyst.[1] As the name implies, the juvenile polyp occurs mainly in children, but is also found in young adults[1-3]. However, they have not been reported in infants under the age of one[4,5]. The most common clinical manifestation of the polyp is bleeding from the rectum. Diagnosis is made by digital examination together with sigmoidoscopy, air-contrast barium enema, or colonoscopy. The differential diagnosis should usually contain the common causes of rectal bleeding including anal fissures, blood dyscrasias, Meckel's diverticulum, intussusception and duplication of the bowel[2,3]. We found juvenile polyps to be the etiologic cause of rectal bleeding in most of the children coming to our clinic between the years 1982-1986. In this study we present fifty-two cases of juvenile polyps and discuss their clinical manifestations and management.

Material and Methods

Our study group consisted of fifty-two patients with juvenile polyps who had been diagnosed and treated in the Department of General Surgery at the Karadeniz University Faculty of Medicine between July 1982 and November 1986. Their clinical features were re-evaluated retrospectively.

Results

There were thirty males and twenty-two females. Their ages ranged between 2-27 years, the majority (76%) being in the first decade of life (Table I).

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TABLE I: Age and Sex Distribution

Age (yrs)	Male	Female
0 - 5	10	6
6 - 10	12	12
11 - 20	4	3
21 - 30	3	1
31 - 40	1	–

TABLE II: Symptoms

	No. of cases
Bleeding	47 (90%)
Anemia	14 (25%)
Prolapse	3 (6%)
Auto-amputation	1 (1.9%)
Abdominal pain and diarrhea	1 (1.9%)

The most common symptom was chronic bleeding which occurred in 47 patients (Table II). Twenty-five percent of the patients presented with anemia. Other symptoms such as prolapse, auto-amputation, abdominal pain and diarrhea were rare. The symptoms persisted for a period of from 20 days to 16 years. In addition some of the patients had other associated diseases (Table III).

As shown in Table IV, 96.7% of the polyps were located in the rectum and rectosigmoid, within easy reach of the sigmoidoscope. Forty-four patients had a

TABLE III: Diseases Associated with Juvenile Polyps

	No of Cases
Parasitosis	8 (15.4%)
Hemorrhoids	1 (1.9%)
Epilepsy	1 (1.9%)
Congenital heart disease	1 (1.9%)
Undescended testicle	1 (1.9%)
Anal fissure	1 (1.9%)
Lymphoblastic leukemia	1 (1.9%)

TABLE IV: Distance from Anus

Distance (cm)	Polyp No.
0 - 5	26 (41.9%)
6 - 10	29 (46.8%)
11 - 15	5 (8.0%)
Greater than 15	2 (3.3%)

TABLE V: Polyp Position in the Rectum

Clockwise	Polyp No.
6	22 (35.4%)
7	15 (24.1%)
12	9 (14.5%)
2	5 (8.3%)
Others	11 (17.7%)

single polyp, two patients had two polyps each and the remainder had multiple polyps which were located throughout the colon. Fifty-eight percent of the polyps were on the posterior wall of the rectum (Table V). The polyps measured between 0.8 cm and 2.7 cm in diameter. Eighty-nine percent of them were pedunculated and the remainder sessile. In two cases, the polyps had been accidentally sloughed off by the sigmoidoscope, fortunately, however, excessive bleeding did not occur.

The polyps were excised only for a histologic diagnosis in the patients with juvenile polyposis coli. These patients were given sigmoidoscopic and barium enema examinations periodically. Solitary polyps in the rectum or rectosigmoid were ligated and excised in direct vision under general anesthesia. In one case, excessive bleeding was observed in the early operative phase which was controlled with suture ligation. Acute lymphoblastic leukemia with thrombocytopenia was diagnosed in this patient two months later. The patients with a solitary juvenile polyp were observed only for the first six months. They did not visit our clinic with any symptoms of a rectal disorder afterwards. However, the two cases of juvenile polyposis have been observed periodically by sigmoidoscopic examination of the colon and barium enemas for a period of three years.

Discussion

Juvenile polyps which have never really been an important surgical problem, occur at any age in both sexes. In some investigations, juvenile polyps have been found to be slightly more common in boys than in girls[2,3]. In our cases, most of the polyps occurred in the first decade of life and were more common in males than in females.

Bleeding was the most common symptom noted in our patients. However, we did not observe any massive hemorrhages or intussusception in the post-operative period. In one case of excessive bleeding, the underlying cause was thrombocytopenia due to lymphoblastic leukemia.

The second common finding was anemia. In children, polyps should be investigated with a sigmoidoscope and barium enema to determine the etiology of the anemia. The pathogenesis of juvenile polyps has been attributed to hereditary, congenital, inflammatory, allergic and neoplastic causes[6-12]. In our series, parasitosis was found in 15.4 percent of the cases as an associated disease. Thus, parasitosis may play a role in the pathogenesis of juvenile polyps[2,3,11,12].

In our series, 96.7 percent of the polyps were located in the rectum, especially on the posterior wall. Due to this localization, the posterior wall of the rectum should be given a thorough sigmoidoscopic examination[5]. The dimensions of these polyps, pedunculated or sessile, coincided with the literature[3].

Controversy exists regarding the therapy of a solitary juvenile polyp in the rectum. If the patient is in the first decade, the proper therapy consists in removal of the polyp. In other cases, the colon may be excised by a colotomy, or the polyp may be observed to see if auto-amputation is taking place or if any malignant transformation has occurred; that is, if polyps have not been observed in the first decade[2,3,13,14]. However all colonic polyps occurring in the second decade must be excised due to their malignant potentialities. If polyps are multiple, one of the polyps should be excised for diagnostic purposes and the others should be observed with a sigmoidoscope periodically for evidence of transformation to adenomatous polyps, villous adenomas or carcinomas[3,7,14,15]. Our two cases of juvenile polyposis coli have been observed in our clinic for three years.

Summary

Fifty-two patients with juvenile polyps of the colon examined over a four-year period are presented. There were thirty males and twenty-two females. The most common symptoms were bleeding and anemia. 96.7% of the polyps were located in the rectum. Forty-four patients had a solitary polyp and the remainder,

multiple polyps. The single polyps in the rectum were ligated and excised in direct vision under general anesthesia. The diagnosis of familial juvenile polyposis coli was confirmed by one biopsy. The patients were given periodic examinations of the colon with a sigmoidoscope and the administration of barium enemas.

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