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A RETROSPECTIVE STUDY ON RECTAL POLYPS IN PAEDIATRIC AGE GROUP IN BUNDELKHAND MEDICAL COLLEGE. SAGAR. M.P.

General Surgery

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KEYWORDS

A Rectal polyp is a polyp (fleshy growth) occurring on the lining of the Rectum. Untreated colorectal polyps can develop into colorectal cancer. The majority of polyp lesions identified during childhood are almost always benign. Some children and adolescents with polyps have an underlying predisposition to develop colorectal cancer (CRC). Paediatric patients with colonic or rectal polyps often do not have a fully developed polyposis phenotype, making identification of those at risk of CRC a challenge. In general, determining the actual risk of CRC for the individual patient can be difficult. However, in adults, the decision to use genetic testing is often more done if the patient exhibits a characteristic polyposis syndrome. Recently, much progress has been made in the understanding of the genetic aetiology of familial polyposis syndromes. Genetic testing to confirm diagnosis and to test asymptomatic relatives has become a part of standard care for persons and families with these conditions. The identification of a polyposis syndrome in offspring may have major implications for parents.

Juvenile Polyps-

The most common type of polyp encountered in paediatric gastroenterology is the isolated juvenile polyp (1). The term 'juvenile' refers to the type of polyp and not the age of onset of the polyp. The most frequent presentation is painless rectal bleeding. Other presentations include a prolapsing rectal mass (frequently mislabelled as a rectal prolapse) or mucopurulent stools. Juvenile polyps are most frequently diagnosed in the first 10 years of life, with a peak age of diagnosis between two and five years of age. Approximately 50% of children with juvenile polyps have more than one polyp, with the majority being left sided. Polyps measure 1 cm to 3 cm in size, with 90% being pedunculated. Histologically, the typical juvenile polyp has a distinctive cystic architecture, mucus-filled glands, a prominent lamina propria and dense infiltration with inflammatory cells. These findings have led to overlapping terminology, including inflammatory polyps, retention polyps andhyperplastic polyps, depending on the dominant histological finding. Solitary juvenile polyps carry no risk of intestinal cancer (2). The number of juvenile polyps is important because more than five polyps may carry implications for risk of CRC, which is discussed below. A challenge occurs when managing a patient with three or four juvenile polyps, because it is unclear whether the patient will develop the JPS phenotype (3) and therefore be at significant risk of intestinal cancer.

JUVENILE POLYPOSIS SYNDROME:

JPS is an autosomal dominant condition characterized by multiple (more than five) juvenile polyps throughout the colon (4). Patients usually present late in childhood or in early adolescence with rectal bleeding. The polyps continue to accumulate during adulthood. In very rare cases, children (including infants) present with failure to thrive, anaemia, hypoalbuminemia and abdominal pain secondary to large numbers of polyps throughout the GI tract. When a patient has more than five juvenile polyps of the colorectum, juvenile polyps throughout the GI tract, or any number of juvenile polyps and a family history of juvenile polyposis (5), a JPS diagnosis should be considered. Determining the precise cancer risk in children and adults with juvenile polyposis is a challenge. Family studies of juvenile polyposis suggest a 50% risk of developing GI cancer (5-7). CRC has been diagnosed in patients with juvenile polyposis as young as four years of age, although the mean age is in the third decade of life (6) Offspring presenting in their early teens or when symptoms occur should be considered for genetic testing when the disease-causing mutation is known in the family. Suggested surveillance includes colonoscopy every three years from the time of symptom occurence or in the early teen years if symptoms have not occurred in the setting of a family history, and upper endoscopy every two years beginning at 15 years of age (4).

FAMILIAL ADENOSIS POLYPOSIS SYNDROME-

The majority of children and adolescents who are evaluated for FAP are identified in the context of a positive family history of FAP. This is because patients generally do not develop GI symptoms until the third decade of life (mean age 33 years). Most children with FAP have no GI symptoms. However, there are young children who present with haematochezia who have no family history of FAP and who are found to have a severe FAP phenotype (defined as greater than 1000 polyps) (8). This autosomal dominant disorder leads to the development of hundreds to thousands of adenomatous polyps in the colon. The average age of adenoma appearance is 16 years and the average age of colon cancer appearance is 39 years (9). Virtually all patients with FAP develop adenocarcinoma of the colon or rectum if left untreated, and therefore, prophylactic colectomy is the standard of care.

MUTYH ASSOSCIATED POLYPOSIS-

Until recently, no other genetic causes had been described for the remainder of patients with FAP or AFAP. A second mechanistic explanation called MAP, an autosomal recessive condition, has been identified which has important implications for both screening and management strategies. MAP, an autosomal recessive condition, has been identified which has important implications for both screening and management strategies. APC mutations are detected in approximately 60% to 80% of classic FAP patients and in 10% to 30% of AFAP patients; MYH mutations are likely to account for about 10% and 20% to 25% of patients in these groups, respectively (10). Genetic analysis of MYH should be offered to patients younger than 18 years of age with a phenotype resembling FAP or AFAP when no APC mutation is identified by genetic testing. Predictive genetic testing should be offered to siblings of patients found to have biallelic mutations to assess the need for endoscopic surveillance starting at 21 years of age. The current approach to children of biallelic carriers includes full gene screening of unaffected spouses to rule out heterozygous (or even asymptomatic biallelic) carriers, which may result in transmission of a biallelic state to offspring.

ATTENUATED FAMILIAL ADENOMATOUS POLYPOSIS:

AFAP is a variant of FAP. Several distinct mutations within the APC gene have been associated with an attenuated phenotype and an autosomal dominant pattern of inheritance. Patients present with fewer colorectal polyps (less than 100, average 30), later onset of polyps and cancer, extracolonic manifestations and a predilection toward involvement of the proximal colon. In individuals who test positive for

a mutation associated with AFAP, baseline colonoscopy is recommended for those between 16 and 18 years of age (11). Screening with flexible sigmoidoscopy, the recommended modality for classic FAP (11), is inadequate because of the preponderance of right-sided lesions in AFAP. Patients with an APC mutation but negative endoscopic examination should undergo a repeat colonoscopy at 20 years of age. Patients who have colonoscopic findings consistent with AFAP should undergo polypectomy when feasible, followed by continued yearly surveillance. Colectomy is advised when polyps are difficult to control colonoscopically (20 polyps or more; when one or more polyps show advanced characteristics, including size larger than 1 cm; or advanced histology). For patients with uninformative test results, the same recommendations apply, except that subsequent colonoscopy may be performed at two-year intervals. Upper endoscopy screening recommendations for AFAP are the same as for FAP and include upper endoscopy starting from 25 or 30 years of age (12).In this study we aim to study the clinical presentation of Rectal polyps which aids in the early diagnosis and further follow up of the patient.

AIMS:

To observe the presentation of colorectal polyps and need for follow-up.

OBJECTIVES:

1. Clinical presentation of colorectal polyps.
2. Age at presentation of colorectal polyps.
3. Analysis on biopsy of colorectal polyp.

METHODS

30 children with Rectal polyps were reviewed retrospectively in the department of General surgery Bundelkhand medical college sagar. Madhya Pradesh.

Ethical clearance was obtained from the ethical review committee of Bundelkhand medical college. Written informed consent was obtained from the parents of individual participants at the time of admission.

Inclusion And Exclusion Criteria:

Informed consent was obtained from the parents of the patients after carefully explaining the procedure details and potential complications. All patients of paediatric age group diagnosed with rectal polyps were included. Parents who did not consent to the procedure and/or had thrombocytopenia and coagulopathy were also excluded from the study.

Procedure:

The patient received a standard written preparation depending on the patient's age and the family's cooperation. One day before the procedure, the patient was advised to begin a clear fluid diet. On the day before the procedure, patients were made to drink a solution of polyethylene glycol dissolved in water (250 mL) at a rate of 250 mL every 30 min. At night, a saline enema was performed.

Polyps were immediately placed in formalin for transportation to the pathology department for histopathological examination.

RESULTS AND DISCUSSION:

Sex	Number of patients	Percentage
Female	12	40%
Male	18	60%

Males were commonly affected with a male to female ratio of 1.5:1. Around half of the patients were in the age group of 5yr to 8yrs (46.6%). There was almost the same incidence in age groups 2 to 5years (16.6%) and 5 to 8 years (20%). 10% of the patients presented at the age between 0 to 2 years. Only 6% patients presented at around 11 to 14 years**.**

INCIDENCE ACCORDING TO AGE-

Age	Number of children	Percentage
0 to 2 years	3	10%
2 to 5 years	5	16.6%
5 to 8 years	14	46.6%
8 to 11 years	6	20%
11 to 14 years	2	6%

CLINICAL SYMPTOMATOLOGY-

Symptoms	Number of patients	Percentage
Bleeding per rectum	12	40%
Mass protruding from anus	18	60%
Abdomen pain	4	13.3%
Diarrhoea	3	10%

Most common presentation was mass protruding from anus which was in around 60% of patients followed by bleeding per rectum in 40% of patients. Patients rarely presented with abdominal pain (13.3%) and diarrhoea (10%).

All the polyps which were excised Were sent for histopathological examination of which 24 (80%) were juvenile polyps 3 (10%) Were hamartomatous polyps and 3 (10%) were adenomatous polyps.

CONCLUSION:

Incidence of Rectal polyp was its highest at around 5 to 8 years of age with mass protruding from anus being the most common clinical presentation. This was followed by 2nd most common presentation i.e., bleeding per rectum. The above are the observations made by us at BMC Sagar.

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