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Pathology of Colorectal Polyps: A Study from South of Iran

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Background: In western countries with high prevalence of colorectal cancers, colonic polyps are usually adenomatous. There are few studies from Iran regarding to the predominant type of polyps in colorectal area.
Objectives: We conducted this retrospective study to evaluate the predominant colorectal polyps in our center as the largest referral center of the South region of Iran.
Material and Methods: We retrospectively analyzed pathology reports of colonoscopies during five years (2005 - 2011). Histologic reports and demographic findings were recorded and compared with published studies in the literatures of other countries from different geographic regions of the world.
Results: During these years, 990 patients with colorectal polyps were refered to the center. The most common types of polyps were adenomatous (603), followed by hyperplastic (300), juvenile (80), inflammatory (5) and Peutz-Jeghers (2). The most common site of polyp was rectosigmoid.
Discussion: The type and distribution of colorectal polyps in Iran is very similar to western countries.

Keywords: Colorectal Polyp; South of Iran

1. Background

A gastrointestinal (GI) polyp is a discrete soft-tissue mass protruding into the lumen (1). Colorectal polyps are very common. The most common polyps of the colorectal is the epithelial polyps which consisted of adenomatous and hyperplastic polyps. The other less common polyps are nonepithelial polyps consisted of inflammatory, and hamartomatous (Juvenile and Peutz-Jeghers) polyps (2). Most of the previous studies regarding the epidemiology of colorectal polyps, have been obtained from autopsy findings, that a very few studies were from Iran. In a review of Iranian publications before 2013, only two papers were characterizing the colorectal polyps in Iran (1, 3).

2. Objectives

In this study, we amied to evaluate the distribution, demographic findings and anatomical location of different types of nonmalignant colorectal polyps during five years (2005 - 2011) in the affiliated hospitals of Shiraz University of Medical Sciences including OPD clinics, as the largest referral center of the South region of Iran.

3. Material and Methods

In this descriptive study, all the consecutive pathologic reports of colonoscopies, in which at least one polyp was detected over a five-year period (2005 - 2011) referred to the mentioned institute, and the pathology files of two large affiliated hospitals of Shiraz University of Medical Sciences including OPD clinics were collected.

All the pathology reports with the diagnosis of nonmalignant colorectal polyps including epithelial and nonepithelial polyps were included in the study. All the demographic findings such as age, gender, location and also the type of the polyps were removed from the pathology reports. Patients with polyposis were excluded.

4. Results

During the study period 990 colorectal polyps were identified in two associated hospitals including OPD clinics. Among these 990 colorectal polyps, some patients had more than one polyp, so 973 patients compromised of 652 (67%) male and 321 (33%) female patients were subjected to this study. However in further reports, we consider each polyp as a separate case (Table 1).

Implication for health policy/practice/research/medical education:
It helps people working in the field of gastroenterology to know the common polyps in the lower GI tract in the South of Iran

The age range was varied from 3 to 85 years old. The most common site of the polyps was rectosigmoid (912 cases), (Table 2). There were 903 cases with epithelial polyps, composed of 603 adenomatous (60.9%) and 300 hyperplastic polyps (30.3%).

Among patients with adenomatous polyps, 476 cases were male and 127 were female. Among these type of polyps, 547 were tubular adenomatous polyp and the remainders were villous (45 cases) and tubulovillous type of adenomatous polyp (11 cases). In these adenomatous polyps, 595 cases had low grade of dysplasia, eight cases had at least high grade dysplasia.

Among the individuals with hyperplastic polyps, 297 had regular hyperplastic polyps, and there were just three cases with the morphology of sessile serrated polyp with abnormal architecture without dysplasia. Among patients with nonepithelial polyps , there were 80 cases with juvenile polyps, five cases with inflammatory polyps and two patients with Peutz-jegher polyps.

Table 1. Distribution of Different Types of Colorectal Polyps

Polyps	No. (%)	M/F	Age range, years
Adenomatous	603 (60.9)	476 / 127	42 - 85
Hyperplastic	300 (30.3)	267 / 33	38 - 76
Juvenile	80 (8)	48 / 32	3 - 16
Inflammatory	5 (0.5)	3 / 2	32 - 67
Peutz-jegher	2 (0.3)	2 / 0	18 - 22
Total	990	796 / 194	3 - 85

Table 2 . Distribution of Polyps Regarding the Location in the Colon in Shiraz

Location	Adenomatous polyps, No. (%)	Hyperplastic Polyps, No. (%)	Juvenile Polyps	Inflammatory Polyps	Peutz-Jegher Polyps	Total, No. (%)
Cecum	10 (1.7)	5 (1.7)	-	-	-	15 (1.4)
Ascending colon	14 (2.3)	2 (0.6)	-	-	-	16 (1.5)
Transverse colon	15 (2.4)	2 (0.6)	-	-	-	17 (1.6)
Descending colon	20 (3.3)	3 (1)	5 (6.2)	-	2 (100)	30 (3.1)
Sigmoid	56 (9.3)	50 (16.7)	35 (43.8)	-	-	141 (14.5)
Rectum	488 (81)	238 (79.4)	40 (50)	5 (100)	-	771 (77.9)
Total	603	300	80	5	2	990

Table 3. Comparison Between Different Published Studies From Different Geographic Areas in the World Regarding The Distribution of The Polyps

Country	Total No. of Polyps	Adenomatous Polyps, No. (%)	Hyperplastic Polyps, No. (%)
Denmark (5)	305	184 (60.3)	121 (59.6)
UK (Liverpool) (9)	843	242 (28.7)	574 (68)
Norway (10, 11)	445	329 (73.9)	174 (39.1)
South America (11)	102	13 (12.5)	23 (22.5)
Canada (11)	582	871 (83)	129 (12.3)
Hong Kong (8)	200	123 (61.5)	62 (31)
Thailand (7)	696	271 (39)	250 (36)
India (6)	151	99 (79.8%)	11 (8.8)
Iran (1)	154	97 (63)	21 (13.6)
Current Study	990	603 (60.9)	300 (30.3)

5. Discussion

The epidemiology of colorectal polyps is different in various countries. It is very important to know the distribution of colorectal polyps in every country, because it may affect the efficacy of screening modalities and also the prevalence of adenomas that roughly equivalent to the risk of colorectal malignancies (4, 5). There are very few studies from Iran and Middle East regarding to the distribution of different types of colorectal polyps (1, 3).

Therefore in this study we tried to evaluate the frequency of nonmalignant colorectal polyps concerning their type, age, gender and location.

In this study the majority of polyps were adenomatous located in the rectosigmoid area. Table 3 shows a comparison between our findings with other studies from Western countries and countries such as India (6), Thailand (7) and South America (8).

Overall, in most of the studies from Western countires, adenomatous polyps have been more common than hyperplastic polyps, that was comparable to our findings. The results from Iran have been very similar to Western countries such as USA (15), Norway (9, 10), and Canada (11) and different from reports of countries such as Denmark (5) in which the number of hyperplastic polyps were more common than adenomatous polyps. There are also uncommon reports from countries such as Thailand (7) in which the highest number of polyps was juvenile type colorectal polyps.

The results of our study illustrating the predominant type of polyps are also very similar to prior studies from Iran, one of which has been conducted based on autopsy studies (3) and the other recent study was based on colonoscopic findings of patients (1). It means that the pattern of colonic polyps in Iran has not been changed, on the other hand, according to recent studies, the incidence of colon cancers is increasing in Iran (12).

We think that it can be a very important sign for more and better screening method of the people older than 40 years (12). Also, for animproved confirmation of our results, another prospective study concerning the frequency of the polyps according to their clinical symptoms and the asymptomatic polyps detected during screening colonoscopic studies is required.

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Authors' Contribution

Bita Geramizadeh: Idea of the paper, writing the paper, analysing the data, helping to collect the data Maryam Keshtkar Jahromi: Collecting the data.

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