

DIAGNOSTICS AND CHOICE OF TREATMENT APPROACH IN COLIC POLYPS AND POLYPOSIS



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ABSTRACT

Colonic polyps and polyposis are studied in 183 patients. It has been found, that sensitivity of rectoscopy is 66.7%, irrigoscopy – 61.1%, virtual colonoscopy computer-aided tomography of colon (VCCATC) – 79.1%.

Endoscopic polypectomy was the main treatment method used in patents with colonic polyps and polyposis (18.6%). In cases of surgical treatment (57.9%) – in patients with total involvement of colon - coloproctectomy with formation of ileal reservoir can be considered as the method of choice.

UDC Code & KEYWORDS

■ 616-006 ■ COLONIC POLYPS AND POLYPOSIS ■
COLONOSCOPY ■ VIRTUAL COLONOSCOPY ■

INTRODUCTION

Urgency of the issue. Colorectal polyps are the subject of increasing interest of national and foreign research groups. The issue gained a status of urgent scientific and clinical problem. It is related to high prevalence of the disease, as well as with the fact, that polyps are one of predisposing factors for development of colorectal cancer (1, 2, 6, 8, 11).

In the total structure of colonic lesions polyps make 16%, whereas amongst practically healthy people this indicator is much higher – 40.6%. This difference is conditioned with the fact that part of patients with asymptomatic polyps do not come in view of physicians (2, 9). According to data of prophylactic examinations and medical aid appealability 4.3% of working age individuals suffer of rectal and colonic polyps (4). Studies of adenoma and cancer case finding rates in different countries show clear correlation between the diseases in individuals after 50 (2, 3, 8).

Currently colonic polyps are considered as obligatory precancerous lesion with high malignization rate, which reaches 90% in cases of villous polyps. In recent years the frequency of colonic polyps is increasing. However, the surgical approach concerning the polyps still is not identified. (4, 5, 7, 10).

There are number of research works devoted to the issue of diagnostics and treatment of colorectal area polyps, where surgical approach of surgeon in case of finding of the polyp is extensively discussed. There are expressed very different, sometimes contradictory points of view. In light of high frequency of colorectal polyps, high rates of surgical complications and relapses, the further research in this direction is rational and potentially productive.

Objective of the research was improvement of the results of treatment of patients with colorectal polyps and polyposis through making optimal choice of diagnostic and surgical treatment methods.

Materials and methods of the reserach. We traced 183 patients with colonic polyps and polyposis, who were treated at the Republican Coloproctology Research Center of the MoH of Uzbekistan between 1998-2008. There were 111

(60.7%) males and 72 (39.3%) females. The age of patients varied from 14 to 78. The average age made (42,2±1,08) years. Aged and elderly patients made 12.5% of the total.

The diagnosis of colonic polyps and polyposis (CPP) has been made based on clinical-instrumental examination and laboratory tests according to classification by V.D.Fedorov (1987). Shapes and studies of diffuse colonic polyposis has been differentiated according to recommendations by V.P.Rivkin (2007) and based on pathological findings in biopsy materials of colonic mucosa.

There is implemented into practice the new combined method of diagnostic of colonic lesions. In cases where the full volume colonofiberscopy was impossible, in order to make final diagnosis in "one visit" immediately after the endoscopy there had been performed VCCATC.

Computer-aided tomography has been performed on 64-cut "Brilliance" tomograph of Philips company. The analysis of the data obtained has been performed on autonomous working station "Brilliance 190P" using special software: Virtual Colonoscopy Cleansing (with automatic removal of defecation); Virtual Colonoscopy Polyp CAR (with different level of virtual reconstruction and precision of visualization of pathologically changed area of colon) The virtual colonoscopy data has been added with the ones of endoscopic examination.

The data of colonoscopy (106), X-ray examination (126) и VCCATC (64) at colonic polyps and polyposis has been analyzed. All the data analysis has been performed using SPSS ver. 15.0. The level of $P < 0.05$ considered as significant for all tests.

Results and their discussion. The patients at admission have been complaining on blood in faeces (98%), dropping out of polyp (16%), pain during defecation, (4 %), constipation (2%), and abdominal pain (1 %).

During digital investigation, that was obligatory for all patients, there was paid attention at anal sphincter tone, condition of rectal mucosa, consistence of polyps and availability of blood on glove. It always preceded the instrumental rectal examination (anoscopy, rectoscopy, colonofiberscopy) which allowed to make a decision on possibility of performing the last without serious complications in case of significant shrinkage of anal canal and colonic lumen with polyps or tumor.

Examination with suspicion to colonic polyp and polyposis usually had been started from proctoscopy. During the examination there was explored mucosa of rectum and distal part of sigmoid colon, identified whether there is spasm or atony, constrictions or tumors, differentiated the type of polyp, took biopsy, if possible from the pedicle of polyp. During the examination different size and shape polyps were found in 122 (66.7%) out of 183 patients with singular and multiple polyps. Polyps usually were located in 4-5-10 cm from anus, mostly had nodular surface, and in 49 patients had villose shape (pic. 1) and based on wide pedicle.

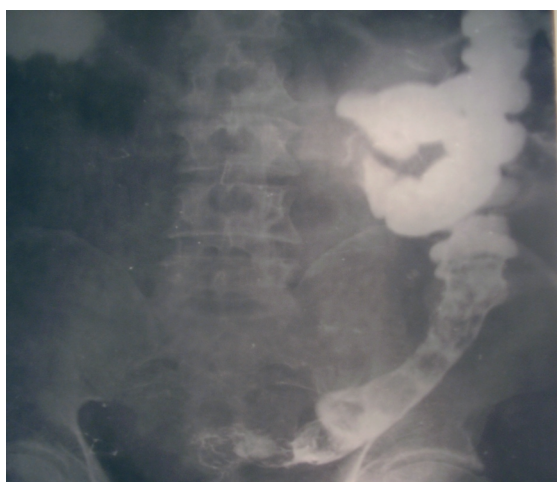
Picture 1. Proctosigmoidoscopy. Colorectal cancer.



However, regardless to the fact, that proctoscopy is a primary and effective diagnostic method, sensitivity of this test did not exceed 66.7%, which is a sign of low diagnostic value of the method. Besides the low sensitivity, the procedure is painful, related to the risk of hemorrhage and creates anxiety in patient. The method is also not informative in cases of high location of polyps. When rectal and sigmoid colon polyps are found, there is need in thorough examination of upper parts of colon. For that purpose the X-ray and endoscopic examination methods are being used.

Important role in diagnostics of colonic polyps and polyposis belongs to X-ray examination, which has been applied in 126 (68.9%) patients. We used the method for identification of radiomorphological and radiofunctional characteristics of colon. Herewith, tight filling of colon with contrast agent allowed identifying the polyps as rounded clearing with smooth contours and small marginal "filling defect". (48,4%) (pic. 2). The colon in such cases is often haustrated and it is difficult to reveal polyps against the background of glomerular relief of mucosa. In cases of double contrast study the polyps have been revealed in a shape of circular tissues or semicircles on the internal contour of colon. (24,6%). Although the method is widespread, relatively cheap and simple in use, its sensitivity in our study did not exceed 61.1%.

Picture 2. Irrigography. Multiple colonic polyposis.

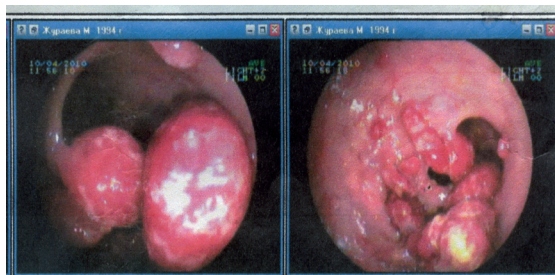


In order to evaluate the condition of upper parts of colon we performed colonofiberscopy in 106 (57,9%) patients. During the examination we paid attention to the condition of colonic mucosa, availability or absence of haustrations and identified the type of polyps, their number in each part of colon, sizes. In addition, we evaluated the tone of each segment of the examined part, its reaction to introduction of air. In a number of cases difficulties of proper cleaning of

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colon from content, contact hemorrhages, sometimes profuse ones, and deformations caused by polyps did not allow to examine all parts of colon. Practically in all cases there were taken biopsy samples. Colonofiberscopy allowed to diagnose colonic polyps and polyposis in 72 (67,9%) patients, identify the location of lesion and extent of it. (see Picture 3).

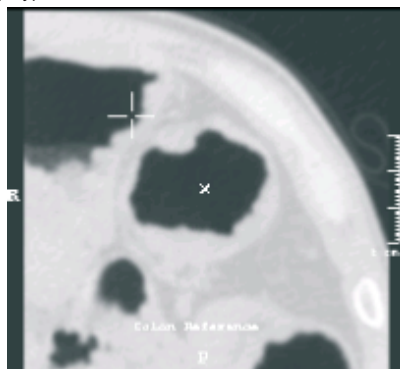
Picture 3. Colonofiberscopy. Multiple colonic polyposis.



At that the solitary polyps were found in 22 (30,6%) observations, multiple ones – in 17 (23,6%) and diffuse colonic polyposis is revealed in 33 (45,8%) cases. Out of them, 11 (15,3%) patients had polyps with signs of degeneration. Therewith, existence of constrictions (7), obstructions, toxic dilatation of colon (3) in 18 (17%) patients did not allow to perform the examination. It is difficult to reveal solitary polyps using colonofiberscopy, which is confirmed by absence of pathological changes in 15,1% of patients.

VCCATC is the method of choice in diagnostics of colonic polyps. Colonic polyps during the VCCATC look as local different size extrusions of colonic wall to its lumen. Sensitivity of VCCATC in finding colonic polyps was dependent first of all to the size of them. (pic. 4).

Picture 4a. Multispiral computer-aid tomography of colon. Multiple colonic polyposis.



Picture 4b. Virtual colonoscopy (b). Multiple colonic polyposis.



The study shows, that VCCATC cannot visualize 7 out of 31 (22,6%) polyps with diameter up to 1 cm, 4 out of 19 (21,1%) polyps with diameter from 1 to 1,9 cm and 2 out of 14 (14,3%) polyps with diameter more than 2 cm. Thus, specificity of this method for colonic polyps made 79,1%. The shortcoming of this method, apart from economical aspects is its low specificity in finding polyps less than 1 cm size. Although VCCATC is sensitive in case of polyps, it is not suitable as a screening method for colonic polyposis case finding due to its low specificity in the cases of smaller size polyps.

Thereby, as an outcome of the examination there are diagnosed solitary polyps in 52 (28,4%) patients, multiple polyps - in 45 (24,6%), family diffuse polyposis - in 71 (38,8%), and in 15 patients there are found polyps with signs of degeneration (8,2%). Amongst the patients with family diffuse polyposis the Peutz-Eggers syndrome is diagnosed in 13 (7,1%), which indicates the high prevalence of this form of polyposis in the region.

Solitary polyps were localized mostly in rectum in 2-8 cm (45), less frequently in 12-16 cm from anus (4), in sigmoid colon (2) and in descending colon (1). More frequently polyps were located on the back wall of rectum (65,4%), less frequently on side walls (19,2%) and front wall (15,4%).

Surgical treatment of solitary and multiple colonic polyps consisted of their removal through anas (18), during rectoscopy (15) and colonofiberscopy (19), as well as by means of performing of radical and multistage surgeries in patients with polyps and polyposis. (106).

Endoscopic polypectomy has been performed when the size of polyp was more than 1 cm (2-8 cm), more than half (57%) of the removed polyps had long and thin pedicle, two polyps (28,5%) had irregular erosive surface, one had hyperemic apex.

Medical treatment has been applied only at small group of patients (25) with rarely occurring uncomplicated total polyposis of gastro-intestinal tract or juvenile polyposis without malignization and profuse bleeding, as well most of elderly patients with severe concomitant diseases, who had contraindications for surgical treatment.

In other cases there was performed polypectomy with consequent pathological examination and the results of it were as follows: tubular adenoma was found in 49,7% of cases, tubulovillous adenoma - in 40,4%, villous adenoma - in 9,9%.

Thus, after analyzing the cases when in the process of examination there were found colonic polyps, we received the data, confirming official statistics on prevalence of this lesion in different age groups of population in terms of predominant localization of polyps and predominant certain histological structure.

The research performed witnesses, that treatment of patients with colonic polyps and polyposis is not complete after removal of colon or its most severely affected parts. The patients who have been operated on require continuous regular medical check-ups and correction of occurring metabolic disorders.

CONCLUSION

1. Colonic polyps are more frequent in patients over 50, predominantly located in the left parts of colon (descending colon, sigmoid colon, rectum), in more than 3/4 of cases the size of polyps does not exceed 1 cm, amongst histological structures the tubular adenoma is the prevailing one.

2. In colonic polyp cases the sensitiveness of rectoscopy makes 66,7%, irrigoscopy - 61,1%, colonofiberscopy - 67,9% and VCCATC - 79,1%.

3. The main treatment method of colonic polyps was endoscopic polypectomy (18,6%). In cases of surgical treatment (57,9%) of patient with colonic polyps with total affection of colon - colectomy with forming ileal reservoir can be treated as the surgery of choice.

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