SCREENING OF GASTRO-INTESTINAL TRACT'S MALIGNANT NEOPLASMS

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Abstract

Screening of oncologic pathology of gastro-intestinal tract by means of multicenter endoscopic examination has shown that phylactic esophagogastroduodenoscopy, colonofiberscopy can be recommended as an obligatory component during planned examination.

Keywords: Screening, endoscopy, oncology

Relevance

Despite all the achievements of modern medicine , the entry of new methods of diagnosis and healing, the disease incidence and death rate due to oncologic diseases has been constantly increasing in the world. It is well-known , that cancer is the second leading reason of death after cardiovascular system diseases death.

If to summarize the cancer frequency of all organs of gastro-intestinal tract, it will take the first place (more than 50%), powering past larynx cancer, breast cancer, and prostate cancer[1.] Therewith disease and death rate are the cancer of approximately all digestive systems [2].

Numerous research proves, that disease prognosis mainly depends on oncology diagnose promptness, which gives much meaning to the earlier diagnosis. Unfortunately, 60–80% patients with for the first time oncology diagnose already have III–IV stages of disease[2]. Potential causes of such late diagnose are late application of patients, erased clinical performance, and also deficient oncological suspicion of doctors with primary stage of healthcare.

In recent times in all well-developed countries fast disease growth of segmented intestine cancer is noticed [3.] Approximately 85% cases of colorectal cancer (CRC)are on the age older than 55. CRC is of rare occurrence with people under the age of 30 , the disease sharply rises with the age increase, reaching the maximum after 70 years old. The disease rate of colorectal cancer in industrially developed countries comparing with developing is significantly higher. Its early diagnose usually is possible on preclinical stage, which requires special laboratory-instrumental screening survey.

Nowadays in the USA and well-developed Western countries the screening programs are intruded, based on identification of implicate blood in fecal matter, however they are not specified enough, and the amount of false-negative results are quite large and equal to from 30 to 70% [4]. For screening diagnosis of colorectal cancer , digital investigation has not lost its significance. However, despite the accessibility of the method, the great amount of oncology still are identified on incurable stages[5.]

Endoscopic research is still a «Golden Standard» of diagnosis. The analysis of literature resources shows the efficiency of multicenter endoscopic investigation, which is one of the most leading methods on the finishing stage of examination for patients to identify oncological pathology[6.]

The high level of informative value, simplicity and respective safety of endoscopic methods let use them in stationery conditions as well as in ambulatory conditions to resolve issues of cancer disease diagnosis, and also supervision of people, related to the groups of high risk of cancer[7]

We have done the analysis of screening diagnosis of oncological pathology of gastro-intestinal tract by means of multicenter endoscopic survey.

Research material and methods

The materials of the analysis were results of investigation of endoscopic survey, carried out in regional hospital named G. Sultanov , period from 2008 to 2011. The diagnose varied on the basis of morphologic investigations and endoscopic picture of gastro- intestinal tract's organs. The methods, used are: esophagogastroduodenoscopy (EGD), colonofiberscopy, rectosigmoidoscopy (RRS), fiber-optic bronchoscopy The obtained results were exposed to statistical analysis.

Results of the research

For the period from 2008 to 2011 in regional hospital named G. Sultanov there were 15067 endoscopic surveys, taken 2699 (17,91%) biopsies, and found out 107 (3,96%) cases with oncological pathology, confirmed by morphological investigation. Most of investigations are oriented to EGD 89,89% (13543 patients), least fiber-optic bronchoscopy – 2,26% (340 patients) Data is represented in the table 1.

Table1- Amount of endoscopic investigations from 2008 to 2011

№	Type of Investigation	Biopsies		Biopsies		Oncopathology	
		Pat.	%	Pat.	%	Pat.	%
1	EGD	13543	89,89	2373	17,52	78	3,29
2	Colonofiberscopy	588	3,90	305	51,87	15	4,92
3	RRS	596	3,96	7	1,17	3	42,86
4	Fiber-optic bronchoscopy	340	2,26	14	4,12	11	78,57
Total:		15067		2699	17,91	107	3,96

How it can be seen from the table 1, most of oncologic diseases, exposed to morphological investigations, is noted in fiber-optic bronchoscopy, from 14 biopsies in 78,57% (11 cases) verified oncopathology. The goes the investigation of straight intestine - RRS, from 7 cases- three of them 42,86%)positive. Therewith the amount of carried fiber-optic bronchoscopies for four is 2,26% (340 patients), and RRS – 3,96% (596 patients) from total number of endoscopic investigations.

Patients, being examined RGD are 89,89% (13543 people) from them 17,52% (2373 people) were taken a biopsy , the results of which 78 (3,29%) people have oncological diseases.

Colonofiberscopy was carried to 588 (3,90%) patients, from them 51,87% (305 people) were taken a biopsy and only 15 (4,92%) people have oncopathology.

While morphological investigation of biopsy materials , taken during endoscopy, the most frequent cancer is a gastric cancer, the results of morphological investigation are shown in the table 2.

Table 2 - the results of morphological investigation from 2008 to 2011

№	Nosology	Men		Women		Total	
		Pat.	%	Pat.	%	Pat.	%
1	Esophageal cancer	9	8,4%	6	5,6%	15	14
2	Gastric cancer	42	39,3%	21	19,6%	63	58,9
3	Large intestine cancer	9	8,4%	9	8,4%	18	16,8
4	Others	10	9,3%	1	0,9%	11	10,3
Total:		70	65,4	37	34,6	107	

From this table we can see that 107 patients have oncology 65,4% (70 people) men and 34,5% (37 people) women. The most frequent verified is gastric cancer– 58,9% (63 cases), from them 39,3% men, then goes large intestine cancer – 16,8% (18 cases), esophageal cancer – 14% (15cases).

In other cases, patients have pathologies, related to pre-cancer diseases. Special Committee WHO recommends to differentiate pre-cancer conditions and pre-cancer changes. To the first ones, are related the diseases, which determine significant increase of cancer risk: chronic gastritis, peptic ulcer, polyposis, gastric remnant gastritis. To the second ones- structural changes of tissues, in which cancer can appear with higher probability than in a normal tissue: intestinal metaplasia and mucous coat of stomach epithelium dysplasia [8 9 10 11 12 13 14 15 16 17.] Recrudescent and long time open forms of peptic ulcer with achlorhydria [18], callous gastric ulcer, torpid process of ulcerous defect cicatrization[19,20,21,22,23,24,25] coexist atrophic and dysplatic changes [26,27,28]. Results of endoscopic investigations are represented in table 3.

Table 3 – Amount of pre-cancer diseases within endoscopic investigation from 2008 to 2011

№	Nosology	Year of investigation				Total	
		2008г.	2009г.	2010г.	2011г.	Pat.	%
1	Esophagitis	16	6	9	7	38	1,6
2	Barrett esophagus	3	-	2	1	6	0,2
3	Chronic gastritis	409	223	613	301	1546	63,4
4	Peptic ulcer	55	31	27	29	142	5,8
5	Duodenum ulcer	35	4	16	8	63	2,6
6	Gastric erosion	92	27	42	88	249	10,2
7	Duodenum erosion	6	6	4	10	26	1,1
8	Duodenitis	35	8	25	26	94	3,9
9	Gastric and duodenum polyps	29	28	24	23	104	4,3
10	Chronic colitis	23	41	34	4	102	4,2
11	Nonspecific ulcerative colitis	5	5	1	6	17	0,7
12	Large intestine polyp	10	25	14	2	51	2,1
Total:		718	404	811	505	2438	

This table shows, that the most frequent is chronic gastritis 63,4% (1546 people) cases, the second position is gastric erosion– 10,2% (249 people) cases. While investigating large intestine , the first place takes chronic colitis– 4,2% (102 people) cases, further go the polyps of large intestine– 2,1% (51 people) cases. Gastric ulcer is 5,8% (142 people) cases Duodenum ulcer is 2,6% (63 people) cases . Gastric and duodenum polyps are identified in 104 (4,3%) patients, duodenitis are diagnosed in 94 (3,9%) people. In different years there is an irregularity of people appealability, peak of an appealability is accounted for 2010.

Infection Helicobacterpylori (H.Pylori) for today is the most leading factor in the gastric cancer pathogenesis. Especially this one is the reason of chronic gastritis development – obligatory stage in the chain of procedures, leading to gastric cancer. This process was

named as «Cascade Correa» – by the name of the author, who was the first to describe development stages of gastric adenocarcinoma [29].

In 1994 International agency for cancer study included H. pylori in the list of carcinogen. H. Pylori is considered as an incitant of cytolergy nowadays. The risk of gastric cancer development increases at the patients infected with H. pylori with chronic gastritis in 2–6 times in comparison with not infected ones. The expressed interrelation between an infection of H. pylori and gastric cancer is proved in the prospective incidence study[30].

On H. Pylori 1208 patients from them 47,5% (574 people) men and 52,5% (634 people) women were surveyed. These researches are presented in table 4.

Table 4 - Results of research on Helicobacter pylori from 2008 for 2011

№	Age	H. pylori positive		H. pylori negative		Total	
		Men	Women	Men	Women	Pat.	%
1	17-25 years	49	39	28	31	147	12,2
2	26-50 years	150	171	116	117	554	45,9
3	51 and older	123	133	108	143	507	42,0
Total:		322 26,7%	343 28,4%	252 20,9%	291 24,1%	1208	
		665 55%		543 45%			

As we can see from table 4 that results on H. Pylori in 55% (665 patients) cases positive with prevalence of female persons – 28,4% (343 persons), generally in category of patients from 26 to 50 years - 26,6% (321 persons) cases.

Conclusion

Thus, the analysis of screening diagnostics of oncologic pathology of a gastrointestinal tract by complex endoscopic research showed that preventive EDG, Colonofiberscopy can be recommended as an obligatory component at planned inspection of patients. So as a result of the conducted research at EGD the carcinoma of the stomach at 58,9% (63 cases), an esophagus cancer at 14% (15 cases), identified 55 by % (665 patients) positive cases on H.Pylori was verified, at 2268 people precancerous diseases (esophagites, chronic gastritis, stomach erosions, a peptic ulcer of a stomach and a duodenum, polyps of a stomach, duodenum) are taped. At Colonofiberscopy the cancer of a colon is diagnosed for 16,8% (18 cases), a chronic colitis, colon polyps, the nonspecific ulcerative colitis relating to pre-cancerous diseases are found in 170 patients.

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