NEED ASSESSMENT FOR GASTROSCOPY IN PATIENTS WITH GALL-STONES

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Kierownik: prof. dr hab. S. Głąszek

Cholelithiasis (gall-stones) occurs in 13% of the Polish population. Patients affected with gall-stones notify non-specific symptoms caused by pathology of the upper segment of the digestive track which coexists with gall-stones.

**The aim of the study** was to analyze the risk of occurrence of pathological changes, within the part of the digestive tract in patients affected with gall-stones, to assess the correlation between data of medical histories of patients and results of gastroscopy based diagnosis; to devise tactics of alterations to the planned measures in case a clinically significant disease has been diagnosed.

**Material and methods.** The study group comprised 615 patients, qualified for cholecystectomy, with symptomatic gall-stones, verified by an ultrasound diagnosis. After being interviewed and examined, all the patients were subjected to gastroscopy, and when necessary biopsy was performed. The statistical analysis was performed using an multifactorial analysis (Pearson’s correlation coefficient for categorical variables).

**Results.** Among 615 patients, the subjects in the study, we found 183 ones (29.7%) with a normal upper digestive tract, we found pathology of the upper digestive system in 70.3% cases (432 patients). Serious pathology resulting in changing the planned treatment was found in 83 patients (13.5%): among those four ones had gastric carcinoma, sixty-three ones suffering from chronic peptic ulcer disease (gastric or/and duodenal), twelve patients were affected with hemorrhagic gastritis, four patients had GERD C and D. In a group of 83 patients cholecystectomy was postponed and the diagnosed disease was treated. Four patients were operated on because of gastric cancer, with intention of cure.

**Conclusions.** 1. Routine gastroscopy performed before cholecystectomy is justified. The percentage of abnormalities diagnosed during gastroscopy proved the above mentioned thesis. 2. Medical histories and an object examination do not allow to state explicitly that there is another disease of the upper part of the digestive system which coexists with gall-stones. In case of diagnosing the other pathology it is necessary to take into consideration an alteration of tactics of management: to delay an operation and treat the other disease which has been diagnosed.

**Key words:** cholelithiasis, gastroscopy, cholecystectomy

Cholelithiasis occurs in 13% of the Polish population, twice more frequently among women than men (1). A golden standard of treatment of gall-stones is an laparoscopic operation of removing a gall-bladder because of little invasiveness, a minimal number of complications after surgery and a short period of hospitalization. Lack of any possibility of a palpable examination of organs in the abdominal cavity is an inconvenience of this form.
This brings a risk of an oversight of pathological changes coexisting with gall-stones. The data from academic literature represent a problem of not paying attention to serious pathologies during an operation, including malignant neoplasm of the digestive track, accompanying gall-stones (2-9). The key role plays gastroduodenoscopy (10-14). In Poland there is no established standard, as for gastroscopy being performed in a routine way before an operation of removing a gall-bladder. In medical literature there are divergent opinions concerning the usefulness of performing gastroscopy before the planned operation of laparoscope cholecystectomy (15-25).

The objective of the paper: to analyze a risk of coexisting other diseases of the upper part of the digestive system in patients suffering from gall-stones; to analyze usefulness of an operation of gastroscopy in determining the rate of risk of passing over other pathology of the upper part of the digestive system; to assess the dependence between the data from medical histories and the results of gastroscopy procedures; to devise tactics of alterations to the planned measures aimed at treatment of the patients with gall-stones in case a clinically significant disease has been diagnosed.

MATERIAL AND METHODS

The study group consists of 615 patients with symptomatic gall-stones, 518 women and 97 men, whose ages range from 19 to 83. Between 1998 and 2005 the patients underwent gastroduodenoscopy before an operation of cholecystectomy, and after receiving a written consent for an examination.

Prior to endoscopic examination, the detailed histories of diseases were collected and physical examination was performed. The special attention was paid to the presence of alarming symptoms, such as: vomiting, loss of weight, anaemia, bleeding, xanthochromia of cutaneous integument and dysphagia. In an endoscopic analysis of a stomach, the binding standards classifications were used. When Barret’s metaplastic columnar epithelium was suspected biopsy specimens were taken from at least two levels at the cardia at the distance of 1-2 cm, four specimens from each level (altogether, at least 8 specimens) (26). In ulceration of the stomach 4 specimens were taken from the edges and one from the bottom of an ulcer, and additionally two specimens from the antrum and the body for a urease test. When the inflammatory changes in stomach mucosa were suspected, biopsy specimens were taken from the following places: two specimens were taken from the antrum, 2-3 cm from the pylorus from a greater curvature of the stomach and two from a lesser curvature of the stomach, and two from the body of the stomach about 8 cm below the cardia of the greater and lesser curvature and one from the angle of the stomach, and additionally two specimens for an urease test, according to the recommendation of Sydney classification, after the modification in Houston (27). A lot of, at least 6 specimens were taken from the alterations suspected of the neoplastic base.

In an endoscopic analysis of the inflammatory changes in the oesophagus in the nature of the reflux oesophagitis the classification of Los Angeles was taken into consideration. Oesophageal varices in the classification of OMED (29). Bleeding from the stomach and duodenum according to Forrest’s classification (30). The early stage of carcinoma of the stomach was analysed according to the Japanese Endoscopic Association (31). The advanced phase of carcinoma of the stomach was analyzed according to Bormann’s classification (32). Microscopic analysis of the taken biopsy specimens was carried out by an experienced histopathologist pursuant to the accepted criteria of WHO (29). In each case an urease test for Helicobacter pylori. In necessary cases according to the binding standards the biopsy specimens were taken while gastroscopy was being performed. The endoscopic procedures were made by means of a video device for gastroscopy.

Methods of a statistical analysis of the results

For analyzing an association between the qualitative features, Pearson’s correlation
coefficient for categorical variables was used:

\[ V = \frac{ad - bc}{\sqrt{(a+b)(c+d)(b+d)(a+c)}} \]

where:

- \( a \) – a number of units possessing both features which have been studied,
- \( b \) – a number of units possessing the first feature but not the second one,
- \( c \) – a number of units possessing the second feature but not possessing the first one,
- \( d \) – a number of units not possessing any of the studied features (33, 34).

RESULTS

The gastroscopy was performed in 615 patients before an operation of removing the gall-bladder because of gall-stones all the patients had suffered from. The detected, during the endoscopy, abnormalities within the upper part of the digestive system were compared to the data from the medical histories (prepared during the interviews) and physical examination (fig. 1).

The positive family histories concerning gall-stones among the members of the immediate family were reported in 373 cases, which makes 60.6% of the study group. An association between young age in which gall-stones manifest itself and family histories in which gall-stones manifest itself. Half of patients from the study group showed alarming symptoms, mostly vomiting. 5% of the patients lost their weights. One person suffered from bleeding from the upper part of the digestive system and one was affected with anaemia.

The most common subject symptoms were: pains in an epigastric region/ a pit of the stomach (96.6% of the patients from the study group), nausea (77.4%), distension with gas of the abdomen (72.7%). It was noticed that roughly half of the patients suffering from a drop in appetite and the other symptoms were: vomiting (43.3%), a feeling of fullness in the stomach (41.8%) and a feeling of constipation. The patients seldom complained about breaking wind (24.6%), diarrhea (14.8%), an altered rhythm of bowel emptying (14.5%). Pain in both an epigastric region and a region under the right ribs, the localization, classically recognized as typical of cholecystolithiasis was experienced by 529 patients which makes 86% of the study group. A region under the left ribs as exclusive localization of pain was reported by 57 patients, about one tenth of the study group. The localization of pain, only under the right shoulder blade and in the chest was reported by 29 patients, which makes 4.7% of the study group.

In the object study, pain on pressure was reported most frequently both in the central epigastric region (89.8%) and under the right rib (86.2%). In most cases, patients reported localization of the pain in these two places at the same time. An analysis of a body mass index (BMI) proved that 56.3% of the patients were overweight, including 18.4% of the ones who had serious weight problems with the BMI over 28. In a study group of 615 patients with gall-stones 615 gastroscopy examinations were performed, stating that the picture of the upper part of the digestive system is normal in a group of 183 patients, which makes 29.7% of the examined.

In the analyzed group of 615 subjects, 378 patients were diagnosed with an infection of Helicobacter pylori, which makes 61.5% of the patients from the study group. A statistical analysis proved the positive association between age of the patients and presence of an infection with Helicobacter pylori in the study group. The most common abnormality in the oesophagus reported during gastroscopy was reflux disease. It occurred in 141 people in total, which makes 22.9% of the study group. There was reflux background to the inflamma-
tory alterations in the oesophagus which were detected in 141 patients in total, which makes 22.9% of the study group, including A, B degrees (according to the classification of Los Angeles) detected in 113 people (18.3%), C and D degrees detected in four people which makes 0.6% of the study group of 615 patients suffering from cholecystolithiasis. During the endoscopy 99 patients reported sliding hiatus hernia of the diaphragm, which constitutes 16.1% of the patients from the study group.

The inflammatory changes of the oesophagus with sliding hiatus hernia were detected in 49 people in total, which makes 8% of the patients suffering from gall-stones from the study group. Six patients (1%) were suspected of Barret's metaplastic columnar epithelium based on the endoscopic picture, which was confirmed by a histological examination of the biopsy specimens of mucous membrane taken from the oesophagus. Thanks to Pearson’s correlation coefficient for categorical variables, associations between subject symptoms reported by the patients and presence of reflux oesophagitis were calculated. The strong association between a symptom of heartburn/pyrosis and the presence of influx disease was only proved. The most common abnormality observed in the stomach were different forms of stomach mucosa inflammation. They were detected in 268 patients in total, which makes 43.6% of the patients from the study group. Gastritis was found in 268 patients of the study group who suffered from gall-stones. In 83% of the cases (223 patients) was proved by means of the endoscopy and confirmed by a histological examination of the biopsy specimens of mucosa taken from the pre – pyloric part of the stomach. In six cases, based on a histological examination atrophic inflammation of the body of the stomach (gastritis, type A) was found, which makes 2.2% of all inflammations. Among 39 patients (13.4% of the total number of inflammations) inflammatory changes of the stomach mucosa were found in the body as well as in the antrum. It was confirmed in a histological examination of biopsy specimens of mucosa taken from the stomach (pangastritis, inflammation AB).

Different types of erosive gastritis (inflammation) were detected in 18% of the whole of the patients, three fourths of the group of the patients (84 people) with erosive gastritis of little intensification (below 10 erosions in the stomach). In a group of 26 patients (4.2%) many erosions were found (several and more), however, many bleeding erosions were found in 12 people, which makes 10.9% of the group with erosions and 1.9% of the study group of 615 patients suffering from gall-stones. Subject symptoms reported by the patients suffering from erosive gastritis were analyzed statistically by the method of Pearson’s correlation coefficient for categorical variables. An association between pain, nausea, a drop in appetite, a feeling of distension with gas and erosive gastritis (inflammation).

The second, in terms of frequency abnormality observed in the stomach was gastro-duodenal reflux. It was associated by more or less intensified inflammatory changes of the stomach mucosa. The phenomenon of gastro-duodenal reflux during the endoscopy was found in 172 patients (28%), however, the normal picture of mucosa with the accidental presence of gall/bile was found in 66 people (10.7%) but features of gall inflammation with the presence of extravasation, erosions were found in 106 patients in total, which makes 17.3% of the study group. The comparative analysis of subject symptoms reported by the patients with gastro – duodenal reflux was carried out. An association between a feeling of both distension with gas and fullness, nausea and gastro – duodenal reflux was proved. Active ulcer formation/ulceration of the stomach and duodenum was found in 62 people, which makes 10.1% of the patients suffering from gall-stones, including ulcer formation of the stomach in 11 patients, which constitutes 1.8% of the study group, ulcer formation of duodenum in 51 cases – 8.3%. Features of the past duodenal ulcer disease were detected in 23 people in a form of past ulcerous deformities of duodenal bulb lumen, which makes 3.7% of the patients of the study group. The symptoms of active and past duodenal and gastric ulcer disease was found in 85 people, which makes 13.8% of the group for which gastroscopy was performed because of gall-stones.

The presence of Helicobacter pylori was detected in 53 people out of 62 patients with active ulcer formation and suffering from gall-stones, which makes 86%. It was reported that all patients with ulcer formation in the stomach had Helicobacter pylori. Subject symptoms reported by the patients suffering from active ulcer formation were analyzed statistically by
the method of Pearson’s correlation coefficient for categorical variables. The statistical analysis of presented data showed that there was an association between detailed features and presence of chronic peptic ulcer disease. At the same time it was proved a correlation of the pain in epigastrium from which patients with gall-stones suffered. As those patients did not suffer from peptic ulcer disease, there are not any reasons for taking the symptom of pain in epigastrium into consideration as a method of detecting chronic disease. Pain in epigastrium was detected in all cases of stomach ulcer disease (frequency 1) and in 518 cases out of 603 patients not suffering from peptic ulcer disease (frequency 0.8590).

Taking the all above mentioned into consideration the value of Pearson’s correlation coefficient does not give any reasons for using this symptom as a method of recognizing the chronic disease. In other cases 49 out of 51 patients suffering from chronic duodenal ulcer disease (frequency 0.9608) and 481 out of 564 patients not suffering from chronic duodenal ulcer disease (frequency 0.8528) pain in epigastrium was observed. Although the correlation \( V = 0.08626 \) between pain in epigastrium and chronic duodenal ulcer disease was stated, the value of the correlation coefficient does not give any reasons for using it as a method of recognizing this chronic disease. 4 people suffered from malignant neoplasm of the stomach, which makes 0.61% of the studied group. Alternations of a polypus character were detected in the stomach in 7 cases (1.1%), including an adenomatous polyp of 12 mm in diameter, with dysplasia of a big degree, which was totally removed with a diathermic loop using a method of endoscopic electroresection. Three hyperplastic polyps, of less than 1 cm in diameter were also removed by a method of endoscopic electroresection. Three intramural alterations, smaller than 0.5 cm in diameter were found and left further endoscopic observation. In 83 cases (13.5%) out of 615 patients with gall-stones and for whom gastroscopy was performed, an operation of removing a gall-bladder was postponed and special treatment appropriate for a detecting disease was incorporated (tab. 1).

There were made statistical calculations of serious abnormalities detecting during the gastroscopy, forcing to change the way of treatment. The statistical analysis proved the proportional distribution of detecting additional abnormalities in separate age brackets. It was stated that young age of a patient did not make impossible the presence of serious pathology in the upper part of the digestive system. It was proved that 13 patients with gall-stones under forty years old suffered from other serious diseases and abnormalities, forcing to postpone an operation and treat accidentally diagnosed disease. Patients under 40 makes 15.7% of the group requiring to postpone cholecystectomy. A statistical analysis of subject symptoms in a group of patients with gall-stones and additional pathology in the upper part of digestive system in comparison with all the patients suffering from gall-stones did not show statistically characteristic division between these two groups. The above mentioned statement confirms the thesis about lack of any reasons for confirming another serious abnormality accompanying gall-stones when a subject examination is taken into consideration. An analysis of alarming symptoms proved in a group of patients with gall-stones and detected pathology, forcing to postpone an operation of removing a gall-bladder showed lack of statistically essential division between these patients and those only with gall-stones. This does not allow to exclude a group with additional pathology from all the patients from the study group taking medical histories into consideration (tab. 2).

**DISCUSSION**

Cholelithiasis and its complications belong to the most frequent problems of our civilization. An asymptomatic character of cholelithiasis makes a substantial proportion of the cases of the disease and does not require an operation. In case of an evident character of gall-stones with repeating pains, an operation...
Table 2. Results of the histopathology examinations in the study group of patients suffering from gall-stones

<table>
<thead>
<tr>
<th>No</th>
<th>Endoscopic diagnosis</th>
<th>Histological diagnosis</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>patients</td>
</tr>
<tr>
<td>1</td>
<td>early gastric carcinoma</td>
<td>adenocarcinoma tubulare invasium G2</td>
<td>2 (0.32%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>adenocarcinoma tubulare exulceratum</td>
<td>1 (0.16%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>foci carcinomatis superficialis intramucosi (early gastric cancer)</td>
<td>1 (0.16%)</td>
</tr>
<tr>
<td>2</td>
<td>ulcer of the stomach</td>
<td>ulcus ventriculi cum gastritis chronica activa minoris/mediocris gradus</td>
<td>11 (1.8%)</td>
</tr>
<tr>
<td>3</td>
<td>Barret’s oesophagus</td>
<td>oesophagitis cum metaplasia intestinalis (Barret’s metaplastic columnar epithelium)</td>
<td>2 (0.3%)</td>
</tr>
<tr>
<td>4</td>
<td>oesophageal papilloma</td>
<td>papilloma planeopitheliale parvum, sine atypia, excisio competa</td>
<td>6 (1%)</td>
</tr>
<tr>
<td>5</td>
<td>oesophageal blastomycosis</td>
<td>candidiasis oesophagi</td>
<td>9 (1.5%)</td>
</tr>
<tr>
<td>6</td>
<td>GERD C i D</td>
<td>fragmenta texti granulationis et necrotici et fundo ulceris, oesophagitis chronica</td>
<td>4 (0.6%)</td>
</tr>
<tr>
<td>7</td>
<td>gastric polyp</td>
<td>adenoma tubulare ventriculi cum dysplasia mediocris gradus, excisio completa, polypus hyperplasticus ventriculi</td>
<td>1 (0.16%), 6 (1%)</td>
</tr>
<tr>
<td>8</td>
<td>submucous tumours</td>
<td>leomyoma parvum ventriculi, excisio completa</td>
<td>3 (0.5%)</td>
</tr>
<tr>
<td>9</td>
<td>gastritis</td>
<td>inactive chronic gastritis H. p.(-)</td>
<td>23 (3.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inactive chronic gastritis H. p.(+)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>active chronic gastritis H. p. (-)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>small degree</td>
<td>19 (3.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>average degree</td>
<td>16 (2.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>large degree</td>
<td>0 (0%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>active chronic gastritis H. p. (+)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>malego stopnia / small degree</td>
<td>67 (10.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>średniego stopnia / average degree</td>
<td>54 (8.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>znacznego stopnia / large degree</td>
<td>39 (6.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>active chronic gastritis with atrophy H. p. (-)</td>
<td>6 (1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>active chronic gastritis with atrophy H. p. (+)</td>
<td>10 (1.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>active chronic gastritis with intestinal metaplasia</td>
<td>44 (7.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>gastritis, total</td>
<td>278 (45.5%)</td>
</tr>
</tbody>
</table>

H.p. – Helicobacter pylori

of removing a gall-bladder is the choice (35). Cholecystectomy ranks among the most frequent operations of the abdominal cavity. After an operation some of the patients still suffered from pain, sometimes of a similar character and localization, like before the operation. In an endoscopic examination active peptic ulcer disease in the stomach and chronic duodenal ulcer disease, haemorrhagic or erosive mucosa inflammation and gastric – duodenal reflux were detected. The time and reasons for developing of the above mentioned pathology were not clear. In many cases there was an suspicion that they could exist before an operation. Few data from medical literature concerning this subject did not give an unequivocal answer to the question whether complications resulted from perioperative stress or they existed before an operation as both diseases coexisting with gall-stones and independent of it. A patient complains about after meal pains in the epigastrium and a region under the left rib is directed to an ultrasonography examination of the abdominal cavity. After confirming the presence of concrements in the gall-bladder, the diagnostic process was most often recognized as the one which was finished. Other examinations were not usually carried out.

The patient was referred to laparoscopic cholecystectomy. This method is characterized by the high degree of safety, minimum risk of complications and short period of hospitalization and convalescence (10-13). Applying this technique of an operation limits possibility of full assessment of organs from the abdominal cavity during an operation and this brings a risk of not noticing serious pathology in the upper part of the digestive system, which can have an influence on further fates of a patient.

In the available medical literature there is information concerning non-recognized during cholecystectomy additional, coexisting with gall-stones diseases of the abdominal cavity
covering the upper part of the digestive system (15-25). Taking the above mentioned circumstances into account it was assumed that it would be positive to widen the panel of additional examinations performed before a planned operation of cutting out of a gall-bladder because of gall-stones, using gastroscopy. Gastroscopy was performed in the study group of the patients with gall-stones before a planned operation of cholecystectomy. Next, by means of a statistical analysis (29, 30) the detailed data from the medical histories and the object examination were compared with the results received from gastroscopy. A statistical analysis of the clinical symptoms collected from 615 patients with gall-bladder both from the subject as well as the object examinations did not prove an essential statistical association between ailments about which a patient complained and recognition of concrete pathology coexisting with gall-stones. Other authors also inform about lack of diagnostic power of clinical symptoms in the aspect of excluding coexisting pathology, unless there are alarming symptoms (35).

Similar conclusions resulted from the performed research of the following teams of scientists and researchers: Rassek and co-authors (15), Schwenk and co-authors (16), Nov and Fraser (19), Głuszek and co-authors (20, 22, 23), Thybusch and co-authors (21). The above mentioned authors analysed the results of gastroscopy in various, as for the number of people, groups comprising 56 to 1143 of the examined people. Polish researchers, Sosada and co-authors analysed the results of gastroscopy in a study group of 2800 patients with gall-stones before laparoscopic cholecystectomy. The authors stated that gastroscopy should be performed for each patient as a routine examination before a planned operation of cholecystectomy (25). Different views were presented by Beyermann and co-authors (17), Ure and co-authors (18), and Fahlke and co-authors (24). They came to a conclusion that gastroscopy should be carried out only when there are earlier data from medical histories of ulcer disease or when the pain is still existing after cholecystectomy.

The results of my own studies conducted in the study group of 615 patients with gall-stones prepared for laparoscopic cholecystectomy confirmed the purposefulness of performing gastroscopy in a routine way. The normal picture of the upper part of the digestive system was found in only 183 patients (29.7%). Abnormalities of a different kind, character, intensity and advancement were found in the rest of the patients.

The argument which is for performing gastroscopy for each patient as a routine examination before an operation of laparoscopic cholecystectomy was detection of serious diseases/pathology of the upper part of the digestive system in 83 patients (13.5% of the study group). These diseases forced to postpone an operation of cholecystectomy (tab. 3).

Four patients were diagnosed with stomach cancer, which means 0.6% of the study group. Those patients who underwent a radical op-

<table>
<thead>
<tr>
<th>Name of the author</th>
<th>Year of publishing</th>
<th>Number of performed examinations (gastroscopy)</th>
<th>Improper result of gastroscopy (%)</th>
<th>Ulcer disease (%)</th>
<th>Gastric carcinoma (%)</th>
<th>An alteration in treatment, postponement of an operation (%)</th>
<th>Conclusions: benefits from the routine performed gastroscopy</th>
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<tbody>
<tr>
<td>Rassek D et al., 1988</td>
<td>589</td>
<td>44</td>
<td>b.d.</td>
<td>0</td>
<td>11,7</td>
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<td>Schwenk W et al., 1992</td>
<td>1143</td>
<td>30,2</td>
<td>b.d.</td>
<td>0</td>
<td>19,8</td>
<td>yes</td>
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<td>Beyermann K et al., 1992</td>
<td>610</td>
<td>11</td>
<td>b.d.</td>
<td>b.d.</td>
<td>b.d.</td>
<td>no</td>
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<td>Ure BM et al., 1992</td>
<td>376</td>
<td>16</td>
<td>3,7</td>
<td>0</td>
<td>1,6</td>
<td>no</td>
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<td>Niv Y, Fraser GM, 1995</td>
<td>56</td>
<td>40</td>
<td>b.d.</td>
<td>b.d.</td>
<td>40</td>
<td>yes</td>
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<td>Głuszek S et al., 1996</td>
<td>101</td>
<td>66</td>
<td>10,9</td>
<td>1</td>
<td>29,7</td>
<td>yes</td>
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<td>Thybusch A et al., 1996</td>
<td>333</td>
<td>47,3</td>
<td>6,8</td>
<td>0,6</td>
<td>8,3</td>
<td>yes</td>
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<td>Fahlke J et al., 2001</td>
<td>646</td>
<td>8,2</td>
<td>b.d.</td>
<td>b.d.</td>
<td>b.d.</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>Sosada K et al., 2005</td>
<td>2800</td>
<td>42</td>
<td>10,9</td>
<td>0,1</td>
<td>10,9</td>
<td>yes</td>
<td></td>
</tr>
</tbody>
</table>
operation with an intention of being cured. In case of a patient with an early stage of stomach cancer a performed operation gave a chance for complete recovery. It is worth noticing that no patients had an examination – gastroscopy earlier. 63 patients (10.2%) were diagnosed with active stomach or duodenal ulcer disease.

Our own results of the study are similar to those coming from the medical literature: Głuszek an co-authors (20), Sosada and co-authors (25). Not diagnosed, active stomach ulcer or/and active duodenal ulcer disease is one of the most frequent problems during and after cholecystectomy and is characterized by the biggest number of complications. They include bleeding and perforation which may appear not only as a result of after-operation injury, but also as a result of the undesired effect of antithrombotic prophylaxis, applied during this period. In a study group of the patients suffering from active ulcer disease, eradicative treatment was applied, and in 60% it was improved by the complete regression of ailments. In this study group cholelithiasis was defined as asymptomatic and they resigned from an operation. These patients are under clinical observation. Operations were postponed in 12 cases because of haemorrhagic inflammation of mucosa of the stomach. Four patients with serious symptoms of reflux oesophagitis of C and D degrees according to the Los Angeles classification had several-week medical treatment, with clinical improvement confirmed by a control endoscopic examination. Then they had laparoscopic cholecystectomy. 23 patients were diagnosed with features of the past stomach or/and duodenal ulcer disease such as scars and deformations, which makes 3.7% of the study group. Then the patients from this group had an operation of cholecystectomy. Patients with chronic, atrophic inflammation of mucosa of the stomach, with focal metaplasia and dysplasia who underwent laparoscopic cholecystectomy, are under clinical observation as a group of high risk of being affected with stomach cancer. Establishing a precise diagnosis brings an evident benefit for this group. The further systematic endoscopic control of the patients allow to diagnose precancerous conditions or mucinous carcinoma. It should be emphasized that stomach cancer detected in stomachs of the patients who did not complain about any clinical symptoms of disease is characterized by better prognosis after an operation than in case of symptomatic character of this disease. The patients suffering from reflux disease, Barret’s metaplastic columnar epithelium and sliding hiatus hernia also benefited from gastroscopy. Diagnosis of the above mentioned diseases allowed to apply appropriate treatment. This gave constant improvement within the scope of regressions of painful ailments. Patients with Barret’s metaplastic columnar epithelium are under clinical observation, according to the binding standard of the procedures (26).

The injuries of mucosa of the stomach like erosions found during gastroscopy could appear because of taking painkillers by the patients, medicine from the group of non-steroid anti-inflammatory drugs. The results presented above focus on purposefulness of performing gastroscopy before the planned operation.

The algorithm of the when other pathology of the upper part of the digestive system is diagnosed to accompany cholelithiasis

In case of finding serious pathology in the upper part of the digestive system during the examination of gastroscopy, the strategy of the procedure should be changed with the postponement of planned cholecystectomy. In case of diagnosing cancer in the upper part of the digestive system, the treatment should be provided by use of the method suitable for the location, advancement and a histological type of neoplasm. In case of diagnosing active stomach ulcer disease or/and active duodenal ulcer disease, cholecystectomy should be postponed and pharmacological treatment should be given according to the binding standards. After 4-6 weeks and the next check-up, after curing ulcers, again one can consider performing laparoscopic cholecystectomy. In case of diagnosing bleeding ulcers, one should make an endoscopic attempt to control bleeding by using a method of putting clips. Diagnosing inflammation of mucosa of the stomach, reflux disease of the oesophagus of little intensity and advancement are not contraindications against performing an operation, however, a patient before and after an operation should be provided with pharmacological treatment, in case of the presence of clinical symptoms of the above mentioned diseases influencing comfort of the life. Detected submucosal alterations
bigger than 20 mm in diameter and polyps in the upper part of the digestive system should be, if possible, remove by means of the diathermic loop during gastroscopy or after histological verification of the taken specimens. Flat angiomas, which were detected should be removed by a method of argon beam coagulation.

CONCLUSIONS
1. Routine performing gastroscopy for each patient with cholelithiasis before the planned cholecystectomy is justified. The proportion of detected abnormalities during the examination of gastroscopy which is in general evenly distributed in specific age brackets, proves the above mentioned thesis.
2. The medical histories and object examinations do not allow explicitly to make impossible coexisting with cholelithiasis other disease of the upper part of the digestive system.
3. In case of diagnosing other serious disease accompanying cholelithiasis one should take into consideration the change of tactics of the procedure: postpone an operation and treat the other diagnosed disease.

REFERENCES
22. Głośzek S, Czerwaty M: Jak zmniejszyć ryzyko przeoczenia nowotworu u pacjentów poddawanych...