

The impact of minimally invasive palliative decompression of bile ducts on quality of life in patients with distal malignant mechanical jaundice

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Palliative treatment for mechanical jaundice is aimed at improving patient quality of life (QoL) and prolonging life. The current QoL studies indicate that there is limited evidence on various techniques for decompression of bile ducts (BD) in terms of their impact on quality of life in patients with distal malignant mechanical jaundice, and their data are contradictory.

THE AIM of the study is to evaluate the effect of minimally invasive palliative techniques on QoL in patients with distal mechanical jaundice (MJ) after palliative decompression of bile ducts.

MATERIALS AND METHODS. From 2017 to 2021, 98 patients who underwent palliative decompression of bile ducts for distal MJ of malignant origin were examined. A validated MOS SF-36 questionnaire was used to assess patient QoL. The survey was conducted before the minimally invasive intervention and 2 months after it. Depending on the technique used for decompression of BD, patients were divided into the following groups: percutaneous transhepatic biliary drainage (PTBD) — 25, internal-external transpapillary biliary drainage (IETBD) — 19, internal-external biliary-jejunal drainage (IEBJD) — 29, and endoscopic retrograde biliary stenting (ERBS) — 25.

RESULTS. Before treatment, a low level of patient QoL was detected in all groups on all scales of physical and psychological components of health (all $p > 0.05$). After 2 months, in the PTBD group, the indicator of the Mental Component Summary (MCS) decreased by an average of 6.9 ± 1.2 points (due to the deterioration of the indicator of social functioning scales by 12.5 ± 5.0 points and mental health by 11.1 ± 1.8 points), while the indicator of the Physical Component Summary (PCS) improved by 11.3 ± 1.1 points. In the IETBD and IEBJD groups, there was an improvement in MCS (by 11.7 ± 1.3 points and 13.0 ± 1.1 points, respectively) and PCS (by 5.2 ± 1.2 and 8.6 ± 1.1 points). With regard to MCS and PCS, slight improvement (by 4.7 ± 2.2 and 2.0 ± 1.9 points) was observed in the ERBS group.

CONCLUSIONS. The IEBJD technique provided important advantages in comparison with other minimally invasive palliative techniques for decompression of BD in terms of its impact on patient QoL. Patients in the IEBJD group had better PCS scores (on average, 47.3 ± 1.3 points) compared to the IETBD (42.1 ± 1.5 points) and ERBS (39.1 ± 1.3 points, $p < 0.05$) groups, and those in the PTBD group (46.2 ± 1.4 points) had better scores than patients in the IETBD group ($p < 0.05$). In the IETBD and IEBJD groups, MCS scores were better 41.9 ± 1.1 and 40.3 ± 1.1 points, respectively) compared to the PTBD (22.6 ± 0.9 points) and ERBS (34.0 ± 1.1 points, $p < 0.05$) groups, and in the ERBS group, they were better than in the PTBD group.

KEYWORDS

distal malignant jaundice, decompression of bile ducts, internal-external biliary-jejunal drainage, patient quality of life, MOS SF-36 questionnaire.

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Evaluation of the effect of any treatment on quality of life (QoL) has become a standard for assessing its effectiveness. The initial examination of patients with jaundice caused by malignant biliary obstruction (MBO) shows that 70–80 % of cases are subject only to palliative treatment, such as decompression of bile ducts (BD) [5]. Minimally invasive palliative techniques for decompression of BD in distal MBO are classified into two categories: antegrade (percutaneous transhepatic biliary drainage, PTBD, internal-external transpapillary biliary drainage, IETBD, internal-external biliary-jejunal drainage, IEBJD [18]) and retrograde (endoscopic retrograde biliary stenting, ERBS). The choice of the BD decompression technique is a matter of debate [6]. One of the weighty arguments in favor of a particular technique may be better QoL after surgery. However, the effect of various BD decompression techniques on QoL in patients with distal MBO is understudied [11].

In 2002, N.S. Abraham et al. [1] defined the clinical characteristics of MBO that produced the greatest adverse effect on QoL in patients according to the MOS SF-36 questionnaire, and identified changes in QoL after retrograde BD decompression with a plastic stent. Weight loss and elevated bilirubin levels had the greatest impact on QoL baseline values in the multivariate analysis. A 33 % reduction in bilirubin levels was associated with significant improvements in social functioning and mental health. Baseline total bilirubin level exceeding 240 mmol/L was associated with no improvement in social functioning during one-month follow-up.

In 2008, Saluja S. S. et al. [16] assessed QoL in patients with stricture caused by gallbladder carcinoma who underwent the BD decompression using antegrade stenting with a plastic stent (27 patients) and retrograde stenting with a plastic stent (27 patients). Assessment of QoL was performed before the procedure and 1 and 3 months after it using QoL questionnaires of the European Organization for Research and Treatment of Cancer (EORTIC) and MOS SF-36 [2]. According to the MOS SF-36 questionnaire, the QoL values 1 and 3 months after the procedure were better in patients after antegrade stenting in terms of physical and mental health components, but not statistically significant. According to the EORTIC questionnaire, global health status was significantly better 3 months after antegrade stenting compared to the retrograde one (74 versus 30.5, respectively, $p = 0.02$). The authors attribute this to a lower percentage of early cholangitis after antegrade stenting (11 %) compared to the retrograde one (48 %), $p = 0.002$. (48 %, $p = 0.002$).

In 2010, there was a study on the association between pruritus and QoL before and 1, 4, 9, and 14

weeks after percutaneous biliary drainage/stenting in 102 patients with MBO [15], in which QoL was assessed using Functional Assessment of Cancer Therapy – Hepatobiliary instrument (FACT-HS) scale [8] and Visual Analog Scale for Pruritus (VASP) [23]. The authors noted a significant decrease in average values of QoL ($p < 0.01$) – from 101.3 before the procedure to 94.8 and 94.7 1 and 4 weeks after it, respectively. Improvements in QoL referred only to functional well-being and social/family well-being, while there were no changes in indicators of emotional and physical well-being.

Antegrade drainage/stenting has been shown to reduce pruritus and quite often hyperbilirubinemia to a level that is not contraindicated for chemotherapy but does not stop the relentless decline in the level of QoL, which is observed in patients whose average survival rate after treatment is less than 5 months.

The effect of endoscopic stenting with plastic stents on QoL in 164 patients with MBO was studied by Barkay O. et al. in 2013 [3] using the Functional Assessment of Cancer Therapy-General (FACT-G) questionnaire before the procedure and 30 and 180 days after it. ERBS 30 and 180 days after the procedure resulted in statistically significant improvements in overall QoL scores and individual QoL scores (physical, emotional, and functional well-being) compared to pre-operative levels.

In 2016, Zhou Z. et al. [24] studied QoL and survival rate in 41 patients with MBO after using various endoscopic retrograde stenting/drainage methods in combination with radiation and chemotherapy. The study used the MOS SF-36 questionnaire and specific QLQ-C30 module, which also evaluates the symptoms typical for mechanical jaundice (jaundice, indigestion, pruritus, weight loss, and fever) [25]. The authors concluded that retrograde bile duct decompression methods combined with radiation and chemotherapy may be more effective in improving QoL and prolonging life.

Comparative assessment of the effect of plastic ($n = 73$) and metal stents (SEMS) (bare-metal ($n = 75$) and drug-eluting ($n = 71$)) on QoL in patients with distal MBO was conducted by D. Walter et al. [20]. Patients completed questionnaires before treatment, 14 days after treatment, and then monthly until 6 months or until death. According to the QLQ-C30 questionnaire, metal stents showed better results on two of the five functional scales (physical functioning ($p = 0.004$) and emotional functioning ($p = 0.01$)). In addition, patients with SEMS reported significantly less frequent symptoms of fatigue ($p = 0.01$), loss of appetite ($p = 0.02$), nausea, and vomiting (0.04) at the same time points after surgery.

In 2020, a group of authors [4] assessed the effect of access (right-sided or left-sided) in antegrade decompression of bile ducts on patient QoL. The researchers examined patients 7 days after the procedure using EORTC QLQ-BIL21 questionnaire [10]. In case of right-sided access, higher rates of intercostal pain, difficulty breathing, fatigue, anxiety, and drainage problems were recorded. Left-sided access provided better QLQ in patients.

The aim of the study is to evaluate the effect of minimally invasive palliative techniques on QoL in patients with distal mechanical jaundice (MJ) after palliative decompression of bile ducts.

Materials and methods

The prospective study included 98 patients who underwent palliative BD decompression for distal MBO on the basis of the Department of Surgery with a course of Emergency and Vascular Surgery of O. O. Bogomolets National Medical University from 2017 to 2021.

A validated MOS SF-36 questionnaire was used to assess patient QoL [2]. The survey was conducted before mini-invasive intervention and 2 months after it.

The SF-36 Health Survey is a multi-item scale measuring 8 health domains: physical functioning (PF), role limitations because of physical health problems (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role limitations because of emotional problems (RE), and overall mental health (MH).

Such indicators as PF, RP, BP, and GH reflect the Physical Component Summary (PCS), whereas VT, SF, RE, and MH reflect the Mental Component Summary (MCS).

The inclusion criteria for the study were as follows: presence of mechanical jaundice, patient age over 18 years, any gender, and impossibility of performing radical surgery. The exclusion criteria were mechanical obstruction of bile drainage without jaundice syndrome, patient age under 18 years, high anesthetic risk (ASA 4), multiple metastatic liver damage, ascites, hemorrhagic diathesis, inflammatory diseases of the lungs and urinary tract, coagulopathy (international normalized ratio > 1.5), history of gastric resection for Billroth-II or Roux, refusal of the patient to do the questionnaire, as well as death of the patient during the study period.

In the presence of mechanical jaundice syndrome, confirmed clinically and in the laboratory, instrumental research methods were used to determine the cause of the disease and the level of the biliary block.

Ultrasound (General Electric Logiq P9 device) was used as a screening diagnostic method, as well as during minimally invasive procedures.

Among other radiation diagnostic tools, computed tomography (GE LightSpeed 64 multispiral computed tomography) was used to clarify the diagnosis. In case of insufficient information, magnetic resonance cholangiopancreatography was performed.

All patients also underwent duodenoscopy using various video endoscope models to assess the condition of Vater's papilla.

During surgical intervention, a General Electric ultrasound scanner and a Siemens Cios Alpha X-ray television unit with a C-arc were used.

According to the BD decompression techniques applied, the patients were divided into four groups (PTBD, IETBD, IEBJD, and ERBS).

The authors used their own BD drainage technique, IEBJD, which provided for the installation of special drainage to divert bile from BD to the initial loops of the small intestine due to the presence of two groups of lateral openings (proximal – located in BD and distal – located in the small intestine) at a distance from the distal border of the tumor to the initial loops of the small intestine [18]. This technique allows avoiding or significantly reducing reflux of intestinal contents into the bile ducts and, accordingly, the development of cholangitis [18].

Self-expanding metal stents (SEMS) were used to perform ERBS.

The intervention was considered technically successful if the drainage or stent was located in the planned area of the affected segment of the biliary tract and provided successful drainage of bile through drained or stented ducts.

The procedure was considered clinically successful if, during the first 10 days after the manipulation, the level of total serum bilirubin decreased by at least 50 % compared to the initial level [11].

The obtained data were analyzed using the IBM-SPSS Statistics 22 statistical package. Descriptive statistics was performed. The normality of the variable distribution was evaluated using the Shapiro-Wilk test. Quantitative comparative analysis of two independent groups was carried out using Student's t-test (in case of a normal distribution of variables; in case of its absence – Mann–Whitney U-test), and qualitative comparative analysis of groups was conducted using Pearson's chi-squared test. The null hypothesis of variable equality was rejected at $p < 0.05$.

Results and discussion

From the medical history data, mechanical jaundice occurred in patients on average 15.2 ± 0.2 days

before the manipulation was performed (from 10 days to 22 days). According to the average duration of jaundice before surgery, patients in the study groups did not differ statistically significantly.

The average level of total serum bilirubin was 194.3 ± 0.7 mmol/L (from 67.2 to 389.6 mmol/L).

The study groups did not differ statistically significantly in the average content of total bilirubin before performing the surgical intervention.

Patients of the study groups as a whole did not differ statistically significantly in mean age, gender ratio, distribution by stage of the cancer process, TNM criteria (all $p > 0.05$), and etiological structure factors (Table 1).

Baseline data showed a low level of QoL in all groups on all scales of physical and mental components of health (Table 2).

The technical and clinical success of minimally invasive procedures was achieved in all patients.

Two months after decompression of bile ducts in the PTBD group, there was a decrease in the mental component of health by an average of 6.9 ± 1.2 points due to deterioration in social functioning by 12.5 ± 5.0 points and mental health by 11.1 ± 1.8 points, resulting from the need for constant care about the bile receiver, as well as deterioration in food digestion (Fig. 1).

Two months after IETBD, there was an improvement in integrative indicators of physical (by an

Table 1. **Main characteristics of patient groups**

Indicator	IEBJD (n = 29)	ERBS (n = 25)	IETBD (n = 19)	PTBD (n = 25)	Total (n = 98)
Age, years (M ± m)	66.3 ± 2.1	62.6 ± 2.1	63.6 ± 3.0	65.5 ± 1.7	60.3 ± 1.7
Male/female	15/14	12/13	10/9	14/11	51/47
Duration of jaundice, days (M ± m)	14.1 ± 0.23	15.1 ± 0.21	16.3 ± 0.44	15.4 ± 0.45	15.1 ± 0.2
Total serum bilirubin, μmol/L (M ± m)	215.0 ± 14.8	208.9 ± 17.1	180.6 ± 20.9	183.2 ± 9.8	198.7 ± 8.9
T (size or direct extent of the primary tumor)					
T ₂	1 (3.4%)	3 (12.0%)	1 (5.3%)	1 (4.0%)	6 (6.1%)
T ₃	14 (48.3%)	12 (48.0%)	13 (68.4%)	12 (48.0%)	51 (52.1%)
T ₄	14 (48.3%)	10 (40.0%)	5 (26.3%)	12 (48.0%)	41 (41.8%)
N (degree of spread to regional lymph nodes)					
N ₀	3 (10.3%)	1 (4.0%)	1 (5.3%)	0	5 (5.1%)
N ₁	19 (65.5%)	21 (84.0%)	11 (57.9%)	19 (76.0%)	70 (71.5%)
N ₂	2 (6.9%)	1 (4.0%)	0	4 (16.0%)	7 (7.1%)
N _x	5 (17.2%)	2 (8.0%)	7 (36.8%)	2 (8.0%)	16 (16.3%)
M (presence of distant metastasis)					
M ₀	12 (41.4%)	13 (52.0%)	11 (57.9%)	11 (44.0%)	47 (48.0%)
M ₁	13 (44.3%)	10 (40.0%)	6 (31.6%)	12 (48.0%)	41 (41.8%)
M _x	4 (13.8%)	2 (8.0%)	2 (10.5%)	2 (8.0%)	10 (10.2%)
Grade					
IIB	1 (3.4%)	1 (4.0%)	1 (5.3%)	1 (4.0%)	4 (4.1%)
III	11 (37.9%)	8 (32.0%)	8 (42.1%)	9 (36.0%)	36 (36.7%)
IV	17 (58.6%)	16 (64.0%)	10 (52.6%)	15 (60.0%)	58 (59.2%)
Tumor etiology					
Pancreatic cancer	20 (69.0%)	17 (68.0%)	10 (52.6%)	18 (72.0%)	65 (66.3%)
Cholangiocarcinoma	5 (17.2%)	5 (20.0%)	6 (31.6%)	4 (16.0%)	20 (20.4%)
Ampullary cancer	2 (6.9%)	2 (8.0%)	3 (15.8%)	3 (12.0%)	10 (10.2%)
Metastatic nodes	2 (6.9%)	1 (4.0%)	0	0	3 (3.1%)

Table 2. Patient quality of life associated with the disease before minimally invasive interventions

Indicator	IEBJD (n = 29)	ERBS (n = 25)	IETBD (n = 19)	PTBD (n = 25)
PF	51.1 ± 5.1 (10.0–85.0)	45.2 ± 3.7 (10.0–85.0)	47.4 ± 3.1 (10.0–85.0)	46.1 ± 3.4 (10.0–85.0)
RP	37.1 ± 4.5 (0.0–75.0)	33.3 ± 4.1 (0.0–75.0)	38.8 ± 3.6 (0.0–75.0)	36.1 ± 4.3 (0.0–75.0)
BP	44.4 ± 5.1 (12.0–84.0)	50.5 ± 2.9 (22.0–84.0)	38.2 ± 4.1 (12.0–84.0)	41.6 ± 4.7 (12.0–84.0)
GH	32.9 ± 1.6 (15.0–45.0)	33.5 ± 1.9 (15.0–55.0)	31.8 ± 2.0 (15.0–55.0)	30.8 ± 1.9 (15.0–55.0)
VT	31.5 ± 2.5 (20.0–55.0)	31.0 ± 1.7 (20.0–55.0)	28.2 ± 1.6 (20.0–55.0)	30.6 ± 1.9 (20.0–55.0)
SF	41.4 ± 5.5 (12.5–75.0)	32.5 ± 3.8 (12.0–75.0)	31.4 ± 3.6 (12.5–75.0)	32.6 ± 4.6 (12.0–75.0)
RE	32.2 ± 3.4 (0.0–66.6)	30.6 ± 3.5 (0.0–66.6)	29.1 ± 3.4 (0.0–66.6)	30.3 ± 3.5 (0.0–66.6)
MH	40.5 ± 2.0 (24.0–56.0)	35.3 ± 1.6 (16.0–56.0)	35.3 ± 1.5 (24.0–56.0)	35.8 ± 1.8 (16.0–56.0)
PCS	38.7 ± 1.9 (25.7–51.0)	37.1 ± 1.3 (25.7–51.0)	36.9 ± 1.2 (25.7–51.0)	36.7 ± 1.3 (25.7–51.0)
MCS	28.9 ± 0.9 (27.0–37.0)	29.3 ± 0.9 (20.6–37.0)	28.6 ± 0.8 (22.3–37.0)	29.5 ± 0.8 (20.6–37.0)

Data are presented as Mean ± standard error of the mean (min–max).

average of 5.2 ± 1.2 points) and mental components of health (by 11.7 ± 1.3 points, all $p < 0.05$) (Fig. 2).

The improvement in the physical component of health is mainly associated with an increase in blood pressure (which corresponds to a decrease in pain) by an average of 22.3 ± 4.6 points, and the mental component of health – with an increase in social indicators (by 36.5 ± 4.7 points) and role functioning due to the emotional state (by 40.2 ± 4.4 points).

Slight changes in physical (on average by 2.0 ± 1.9 points) and mental components of health (on average by 4.7 ± 2.2 points) were observed in the ERBS group and could be explained by deterioration of the general health indicator and insignificant alterations in role-based physical and mental functioning (Fig. 3).

In the IEBJD group, two months after the procedure, there was an improvement in average values of all components of the SF-36 scale (Fig. 4).

It should be noted that the presence of external drainage did not negatively affect such indicators as vital activity, social functioning, role functioning, and mental health. On the contrary, the value of these indicators increased, that is, patients could perform a certain social role and did not avoid communication. At the same time, there was a decrease in pain syndrome and role functioning due to a physical condition, etc. Therefore, the IEBJD group showed an increase in the average values of integrative indicators – physical (by an average of 8.6 ± 1.1 points) and mental components of health (by an average of 13.0 ± 1.1 points).

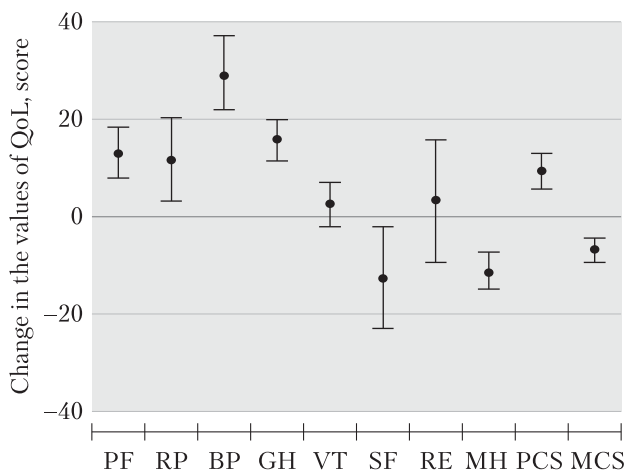


Figure 1. Change in mean values (with 95% CI) of QoL in the PTBD group two months after the BD decompression

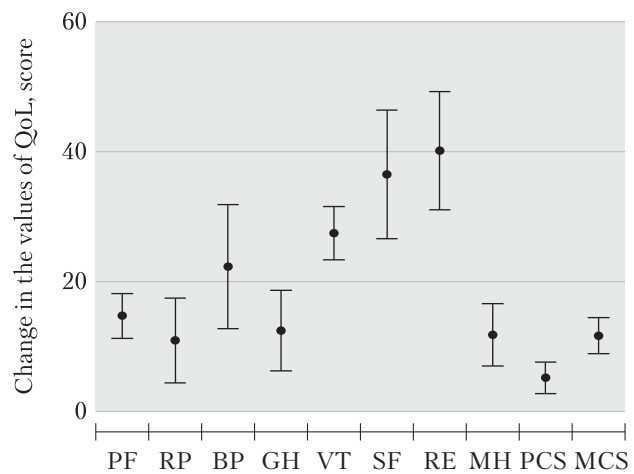


Figure 2. Change in mean values (with 95% CI) of QoL in the IETBD group two months after the BD decompression

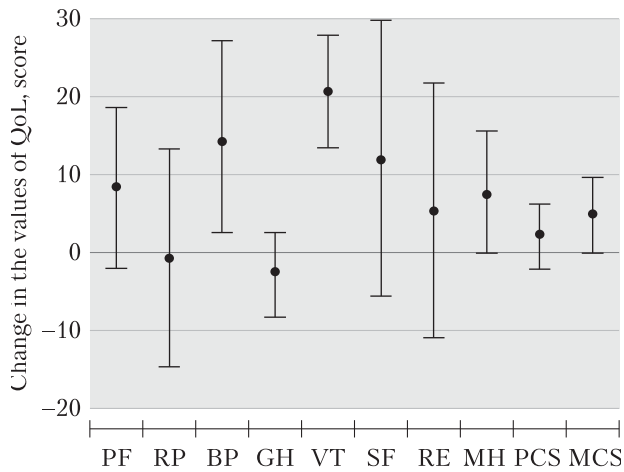


Figure 3. Change in mean values (with 95% CI) of patient QoL in the ERBS group two months after the BD decompression

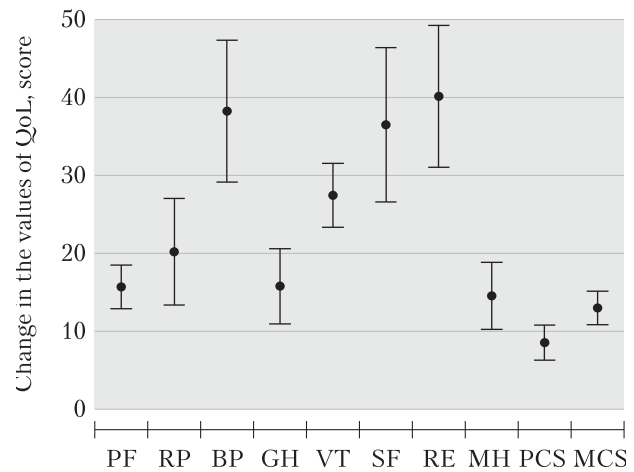


Figure 4. Change in mean values (with 95% CI) of patient QoL in the IEBJD group two months after the BD decompression

Thus, two months after the BD decompression, the physical component of health was lower (39.1 ± 1.3 points) in the ERBS group compared to the PTBD group (46.2 ± 1.4 points) and the IEBJD group (47.3 ± 1.3 dietary supplements), and it was lower (42.1 ± 1.5 points, $p < 0.05$) in the IETBD group compared to the IEBJD group (Table 3). The average score of the mental component of health was the lowest in the PTBD group (22.6 ± 0.9 points) compared to other groups, and in the ERBS group (34.0 ± 1.1 points), it was statistically significantly less compared to the IETBD (40.3 ± 1.1 points) and IEBJD (41.9 ± 1.1 points) groups.

Therefore, 2 months after palliative treatment of distal malignant jaundice, the IEBJD technique provided important advantages in comparison with other techniques in terms of its impact on patient quality of life. Its benefits can be seen within the values of both integrative indicators (physical and mental components of health) and positive changes in individual MOS SF-36 scales.

The main goal of palliative care for patients with MBO is achieving improvement in their quality of

life and prolonging life. Therefore, the QoL studies are necessary for choosing the best technique for decompression of bile ducts [16, 15]. However, there is limited evidence on various techniques for decompression of bile ducts (BD) in terms of their impact on quality of life in patients with distal malignant mechanical jaundice, and the existing studies explore different aspects of the problem and use different research tools (scales). A distinguishing characteristic of studying QoL in patients with MBO is a short duration of the study (from 30 to 180 days) due to low survival rates [23].

We carried out a comparative assessment of four techniques of BD decompression in patients with distal MBO in terms of changes in QoL indicators (for two months). These techniques differed by bile removal (external (PTBD), internal (ERBS), external-internal (IETBD and IEBJD)) and the absence (PTBD, IEBJD) or the presence (IETBD, ERBS) of direct connection of the duodenal lumen with the biliary tract.

Each of the methods of BD decompression has its disadvantages that can negatively affect patient QoL. So, for example, PTBD is associated with loss of a large amount of bile that needs to be consumed *per os*, and

Table 3. Average scores of physical and mental health components 2 months after surgery

Indicator		IEBJD (n = 29)	ERBS (n = 25)	IETBD (n = 19)	PTBD (n = 25)
PCS	Before surgery	38.7 ± 1.9	37.1 ± 1.3	36.9 ± 1.2	36.7 ± 1.3
	2 months after	47.3 ± 1.3	$39.1 \pm 1.3^*$	$42.1 \pm 1.5^*$	$46.2 \pm 1.4^\&$
MCS	Before surgery	28.9 ± 0.9	29.3 ± 0.9	28.6 ± 0.8	29.5 ± 0.8
	2 months after	41.9 ± 1.1	$34.0 \pm 1.1^*$	$40.3 \pm 1.1^\#$	$22.6 \pm 0.9^{*\&}$

* The difference from the IEBJD group is statistically significant ($p < 0.05$).

^ The difference from the ERBS group is statistically significant ($p < 0.05$).

^\& The difference from the IETBD group is statistically significant ($p < 0.05$).

the presence of a lifetime port on the skin [14]; ERBS is accompanied by damage to Vater's papilla and pancreas with the risk of bleeding and pancreatitis [9], and reflux of duodenal contents in the biliary tract in all patients [11], which leads to cholangitis and stent blockage [17]. IETBD, similar to ERBS, connects the duodenal lumen to the biliary tract and is associated with the risk of reflux-associated cholangitis [13, 12, 21, 22]. Patients after IEBJD and IETBD, as well as after PTBD, have a lifetime port on the skin, which causes some discomfort, but these techniques minimize the likelihood of bile loss outwards and duodenal-biliary reflux development [18].

According to our data, in the near future, minimally invasive BD decompression techniques will have different effects on certain aspects of patient QoL. The need for constant care about external drainage, as well as the need for constant use of bile, impairs the social functioning and mental health of patients, which is most evident after PTBD. Other techniques using percutaneous access (methods of external-internal drainage of BD) showed a statistically significant increase in the average values of scale indicators that form the mental component of health. Patients in the ERBS group showed a slight increase in these scales, statistically significant only for the VT indicator.

After ERBS, there were little ($p > 0.05$) changes in the physical health component (PCS) due to deterioration of the general health index (GH) and weak changes in the role-playing physical functioning index (RP). Instead, after using the techniques of external or external-internal drainage, an increase in the average values of PCS ($p > 0.05$) was noted. After two months, the mean PCS values were higher compared to the pre-operative level and the ERBS group ($p > 0.05$). Relatively worse PC scores after ERBS compared to retrograde techniques are probably associated with a higher incidence of early cholangitis [16, 18].

A comparative assessment of QoL in patients with distal mechanical jaundice after using various techniques of palliative antegrade and retrograde decompression of BD showed that after 2 months, the IEBJD and IETBD techniques, in contrast to the PTBD and ERBS, provided positive changes in the indicators of all scales of the MOS SF-36 questionnaire. The IEBED technique has advantages over IETBD in terms of PCS: 47.3 ± 1.3 points versus 42.1 ± 1.5 points, respectively ($p > 0.05$).

The current study has certain limitations: a relatively small number of patients in the comparison groups and the use of only one QoL questionnaire. In addition, the study did not include patients with total bilirubin values > 350 mmol/L and high anesthetic risk (ASA 4).

DECLARATION OF INTERESTS

The authors declare no conflicts of interest.

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ETHICS APPROVAL AND WRITTEN

INFORMED CONSENTS STATEMENTS

All procedures performed in the study and involving human participants were carried out in accordance with the ethical standards of the institutional and/or national research committee, 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Written informed consent was obtained from all individual participants included in the study.

AUTHOR CONTRIBUTIONS

Concept and design of the study: Y.M. Susak, L. Yu. Markulan, R. Y. Palytsya; literature review, discussion of the results: L. Yu. Markulan, R. Y. Palytsya; editing: Y.M. Susak, V. V. Teterina; materials and research methods, research results: R. Y. Palytsya.

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Вплив малоінвазивної паліативної декомпресії жовчних проток при дистальній злоякісній механічній жовтяниці на якість життя хворих

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Основними завданнями паліативного лікування хворих із механічною жовтяницею є поліпшення якості життя (ЯЖ) і збільшення його тривалості. Досліджень ЯЖ хворих при використанні різних методик декомпресії жовчних проток (ЖП) проведено недостатньо, а їх дані суперечливі.

Мета — порівняти ЯЖ хворих з дистальною механічною жовтяницею (МЖ) після паліативної декомпресії ЖП з використанням малоінвазивних методик.

Матеріали та методи. У період з 2017 до 2021 р. обстежено 98 хворих, яким проведено паліативну декомпресію ЖП з приводу дистальної МЖ злоякісного генезу. Для оцінки ЯЖ застосовували валідизований опитувальник MOS SF-36. Опитування проводили до малоінвазивного втручання та через 2 міс після нього. Відповідно до методики декомпресії ЖП хворих розподілили на групи: черезшкірна черезпечінкова холангіостомія (ЧЧХС) — 25, зовнішньо-внутрішня транспаліарна холангіостомія (ЗВТХС) — 19, зовнішньо-внутрішнє біліарно-єюнальне дренування (ЗВБЄД) — 29, ендоскопічне ретроградне біліарне стентування (ЕРБС) — 25.

Результати. До лікування виявлено низький рівень ЯЖ у всіх групах за всіма шкалами фізичного і психологічного компонентів здоров'я (всі $p > 0,05$). Через 2 міс у групі ЧЧХС показник психологічного компонента здоров'я (ПКЗ) знизився в середньому на $(6,9 \pm 1,2)$ бала (внаслідок погіршення показника шкал соціального функціонування на $(12,5 \pm 5,0)$ бала та психічного здоров'я на $(11,1 \pm 1,8)$ бала), тоді як показник фізичного компонента здоров'я (ФКЗ) поліпшився на $(11,3 \pm 1,1)$ бала. В групах ЗВТХС і ЗВБЄД відзначено поліпшення показників ПКЗ (відповідно на $(11,7 \pm 1,3)$ бала та $(13,0 \pm 1,1)$ бала) і ФКЗ (на $(5,2 \pm 1,2)$ та $(8,6 \pm 1,1)$ бала). В групі ЕРБС спостерігали мінімальну позитивну динаміку ПКЗ і ФКЗ (на $(4,7 \pm 2,2)$ та $(2,0 \pm 1,9)$ бала).

Висновки. Метод ЗВБЄД має переваги над іншими паліативними малоінвазивними методиками декомпресії ЖП щодо впливу на ЯЖ хворих. У хворих групи ЗВБЄД відзначено кращі показники ФКЗ (у середньому $(47,3 \pm 1,3)$ бала) порівняно із групою ЗВТХС ($(42,1 \pm 1,5)$ бала) та ЕРБС ($(39,1 \pm 1,3)$ бала, $p < 0,05$), у групі ЧЧХС ($(46,2 \pm 1,4)$ бала) — кращі, ніж у групі ЗВТХС ($p < 0,05$). У групах ЗВБЄД та ЗВТХС були кращі показники ПКЗ (відповідно $(41,9 \pm 1,1)$ і $(40,3 \pm 1,1)$ бала) порівняно із групою ЧЧХС ($(22,6 \pm 0,9)$ бала) та ЕРБС ($(34,0 \pm 1,1)$ бала, $p < 0,05$), а в групі ЕРБС — кращі, ніж у групі ЧЧХС.

Ключові слова: дистальна злоякісна жовтяниця, декомпресія жовчних проток, зовнішньо-внутрішнє біліарно-єюнальне дренування, якість життя хворих, опитувальник MOS SF-36.

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