Original Research Article

EFFECT OF ENDOSCOPIC MANAGEMENT OF UNRESECTABLE MALIGNANT BILIARY STRICTURES ON PATIENT'S QUALITY OF LIFE

Abstract:

Background: Biliary strictures possess challenging diagnosis, requiring a multidisciplinary approach. In gastrointestinal clinical practice, the occurrence of biliary strictures is quite common. Multiple diagnostic techniques are used to examine BS in which endoscopic management is considered comparatively effective and non-invasive intervention.

Objective: The study aimed to observe the impact of the endoscopic management of unresectable malignant biliary strictures on the patients' quality of life (QoL).

Methodology: This Quasi-experimental study was conducted at the Surgical Ward IV Civil Hospital Karachi, Pakistan. A total of 80 patients with diagnosed unresectable malignant stricture, aged between 18 to 70 years, those with disease duration of more than eight weeks and life expectancy > 1 month were included in the study. In addition to the baseline characteristics, the pre and post-treatment quality of life was assessed, and the mean values were compared statistically using SPSS version 19.0.

Results: The mean total score of QoL improved from 71.47 ± 0.88 at baseline to 84.12 ± 1.93 after 30 days of endoscopic management of unresectable malignant biliary strictures.

Conclusion: There was a significant improvement in the patient's QoL after 30 days of endoscopic management of unresectable biliary stricture.

Keywords:

Malignant Biliary Strictures, Endoscopic Management, Quality of Life

Introduction:

Biliary injuries are brought about by different amiable and dangerous conditions, every one of which requires a particular treatment technique. Endoscopy is used to treat biliary injuries, either

as an authoritative technique, an extension to a medical procedure, or for palliative purposes[1]. Unresectable harmful biliary injuries cause jaundice, hepatic brokenness, and intense cholangitis, ultimately decreasing the Quality of life(QoL) for influenced patients.[1,2] Endoscopic biliary stenting has been broadly acknowledged as a viable mitigation treatment for this condition, and its viability has been demonstrated in several studies. [2,3]

Recognizing dangerous and generous injuries productively may predict a superior possibility of determining an appropriate solution to an early illness and those patients with fringe resectable sickness. Imaging studies and injury examining give corresponding data regarding both the etiology of the injury and the degree of the infection. Numerous imaging modalities have been concentrated to survey the best strategy for identifying and separating such injuries.[4]An imminent report evaluating the role of Magnetic resonance cholangiopancreatography (MRCP) in contrast to other techniques including Computed Tomography (CT), endoscopic retrograde cholangiopancreatography (ERCP), etc. for distinguishing dangerous biliary injuries from generous injuries showed practically identical sensitivities of both ERCP and MRCP, i.e., 75% and 71%, respectively. CT had comparatively lower sensitivity and particularity contrasted with both ERCP and MRCP. [5]

Despite the fact that MRCP was practically identical, ERCP gives the capacity to test the injury, making it a more appealing investigation regardless of the test intrusiveness. [6] The affectability and explicitness of fluoro-deoxy-glucose-positron emission tomography (18FDG-PET) to differentiate dangerous from considerate injuries have shifted broadly across contemplates and diverse anatomic areas. In a study including 93 cholangiocarcinoma patients undergoing preoperative 18FDG-PET sweeps, the affectability and particularity for intrahepatic vs. extra-hepatic injuries was 95% and 100% vs. 69.2% and 66.7%, respectively[7].

The reasoning for the examination is that local data and literature are scarce concerning the subject matter. Thus the current investigation was planned to not exclusively produce data yet, in addition, to opt for appropriate endoscopic administration of unresectable harmful biliary injuries. Malignant conditions not benign injuries?!?

MATERIAL AND METHODS

This Quasi-experimental study was conducted at the Surgical Ward IV Civil Hospital Karachi, Pakistan. The sample size of 80 was calculated, keeping the margin of error at 5% with a 95% confidence interval. Both male and female patients with diagnosed unresectable malignant stricture, aged between 18 to 70 years, those with disease duration of more than eight weeks and life expectancy > 1 month, were included in the study. While non-consenting patients, those with previous surgery/any prior biliary drainage procedure, with signs and symptoms of impending duodenal obstruction, coagulopathy (INR > 1.5), and platelet count < 70,000 were excluded from the study.

Besides the baseline characteristics, including age, gender, socioeconomic and educational status, the pre and post-treatment quality of life was assessed using a pre-structured questionnaire. Data were analyzed by using SPSS version 19.0. Mean and standard deviation were computed for quantitative variables like age, mean QoL score at baseline, at the end of 30 days, and disease duration. Frequency and percentage were calculated for gender, economic status, and educational status. The pre and post-treatment QoL score was compared using Paired sample T-test, where p-value < 0.05 was considered significant.

RESULTS

Out of the total 80 enrolled patients, the majority of patients were > 40 years of age and belonged to a low to middle socioeconomic background. The highest qualification was higher secondary education, attained by only 16% of patients (Table 1). Pathology?!?

Table 1: Demographic characteristics (n=80).

Variables		Frequency (n)	Percentage (%)
Age	< 40 years	21	26.25

	> 40 years	59	73.75
Gender	Male	43	53.75
	Female	37	46.25
Socioeconomic Status	Lower SES	39	48.75
	Middle SES	24	30
	Upper SES	17	21.25
Educational Status	Illiterate	26	32.5
	Matriculation	41	51.25
	Intermediate	13	16.25

After 30 days of endoscopic management of unresectable malignant biliary strictures, the QoL score improved. The mean score significantly reduced from 71.47 ±0.88 at baseline to 84.12 ±1.93 after 30 days post-treatment (p=0.001).

Table 2: Comparison of mean QoL score pre and post-treatment.

Variable	**Pre-treatment**	**Post-treatment**	**95% CI**	**p-value**
	Mean ±SD			
QoL Score	71.47 ±0.88	84.12 ±1.93	-13.11 to -12.18	0.001*

*p<0.05 is considered significant.

DISCUSSION

Due to the subclinical presentation of malignant biliary strictures, the diagnosis is usually delayed, and the morbidity rate is significantly high. Moreover, the associated symptoms and complications reduce the QoL and increase operation risks. [8]The epidemiological survey shows

that the general 5-year endurance pace of pancreatic disease is 6 to 7%. Whenever distinguished right on time with just nearby sickness (detailed as roughly 10% cases), the endurance rates are better yet wretched at around 25%[9]. Additionally, the 5-year endurance with extra-hepatic biliary malignant growth following resection was around 30%. However, 0% in unresectable cases[10]. The job of endoscopic administration in harmful biliary injuries relies upon injury site and resectability. Unfortunately, most injuries are un-resectable upon presentation, and just palliative endoscopic strategies can be sought after. Palliative administration has expectedly centered around biliary decompression through ERCP with stent placement[6].

Given these calming measurements, the objective with the beginning phase of the illness is to continue the treatment effectively and explicitly to get to careful resection, as this is the solitary expect a fix. Palliative treatment, paradoxically, centers on the alleviation of indications and deferral of illness movement[11-13]. The present study showed that the mean QoL scores significantly improved after providing 30 days of endoscopic management to patients with unresectable malignant biliary strictures. Similarly, studies have shown that endoscopic management with various modalities effectively improves a patient's life quality, but the relative risk of complexities varies with respect to each intervention. Considering the point, two studies showed that percutaneous transhepatic biliary drainage (PTBD) and Endoscopic ultrasound-guided BD (EUS-BD) are both equally effective, but EUS-BD requires fewer re-interventions and causes mild infrequent adverse effects[14,15]. Another study reported that the clinical success rates, overall cost, and QoL impact of EUS-BD are higher in comparison to PTBD[16].

Furthermore, a huge report across five United States establishments showed that EUS was the best methodology to identify a pancreatic anomaly (11%, 33.3%, and 42.6% separately) among CT, magnetic resonance imaging (MRI), tested in 225 asymptomatic high-hazard grown-ups[17]. Whereas ERCP remains the traditional diagnostic tool for the unresectable biliary strictures that are malignant. However, other more recent noninvasive diagnostic modalities, including computed tomography (CT) scan and magnetic resonance imaging cholangiopancreatography (MRI-MRCP), have limited its scope of use.

Though the present study findings were restricted to limited sample size and single-center population presentation but it provided a base to further elaborate the effect of various

endoscopic procedures in relation to the quality of life of the patients presenting with unrespectable malignant biliary strictures.

CONCLUSION

A significant change in the mean quality of life was observed among the patient with malignant biliary strictures after undergoing endoscopic stent placement. However, more studies on a larger scale should be conducted to rule out the effect of specific endoscopic procedures and their aftermaths.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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