Riwayat: Educational Journal of History and Humanities, 6 (3), 2023, pp. 1985-1991
P-ISSN: 2614-3917, E-ISSN: 2775-5037
DOI: https://doi.org/10.24815/jr.v6i3.34245

Level Of Anxiety In Patients Undergoing Elective Gastroscopy With General And Local Anesthesia

Audrey Yohan Agnes[1]✉, OK Yulizal[2], Yensuari[3]
[1]Mahasiswa S1 Pendidikan Kedokteran, Fakultas Kedokteran, Kedokteran Gigi dan Kesehatan Masyarakat, Universitas Prima Indonesia, Medan, Indonesia
[2,3]Departemen Penyakit Dalam, Fakultas Kedokteran, Kedokteran Gigi dan Ilmu Kesehatan, Universitas Prima Indonesia, Medan, Indonesia
Corresponding Author: yulizal.tech@gmail.com✉

Article history
Received : 2023-04-13
Accepted : 2023-07-23
Published : 2023-08-31

Keywords:
Anxiety ,
Gastroscopy

Abstract: Background: Gastrointestinal endoscopy involves the examination of the mucous membranes of the esophagus, stomach, and duodenum using an instrument equipped with a camera to provide visual images. This procedure has numerous clinical applications, including accurate diagnosis and effective guidance for upper gastrointestinal tract conditions. Insufficient patient knowledge about the impending procedure, potential procedural side effects, or anticipated examination outcomes can lead to heightened anxiety of the patient. This study aims to assess the level of anxiety in patients undergoing gastroscopy. Methods: An observational analytical study was conducted using a cross-sectional design, based on the Hamilton Anxiety Rating Scale (HARS) questionnaire. Results: Moderate anxiety was found in 25 individuals (50%) among patients undergoing gastroscopy with local anesthesia. Meanwhile, among patients undergoing gastroscopy with general anesthesia, 15 individuals (30%) exhibited mild anxiety, and 5 individuals (10%) had moderate anxiety. Conclusion: There is a discernible difference in anxiety levels between patients undergoing elective gastroscopy with general anesthesia and those receiving local anesthesia.

Abstrak: Latar Belakang: Endoskopi gastrointestinal merupakan pemeriksaan membran mukosa esofagus, lambung, dan duodenum dengan alat yang dilengkapi dengan kamera untuk hasil berupa tampilan gambar, memiliki banyak kegunaan, seperti diagnosis yang tepat dan penuntun yang efisien untuk kondisi saluran cerna bagian atas. Kurangnya pengetahuan pasien tentang tindakan yang akan dilakukan, efek samping tindakan atau hasil pemeriksaan yang belum didapatkan, menyebabkan pasien kemungkinan mengalami kecemasan. Penelitian ini bertujuan untuk mengetahui tingkat kecemasan pasien yang akan dilakukan tindakan gastroskopi. Metode : Penelitian analitik observasional dengan menggunakan rancangan cross-seccional study, berdasarkan kuesioner HARS (Hamilton Anxiety Rating Scale) Hasil : Tingkat kecemasan sedang ditemukan sebanyak 25 orang (50%) pada pasien gastroskopi dengan anastesi lokal. Sedangkan, pada pasien gastroskopi dengan anastesi umum ditemukan 15 orang (30%) dengan kecemasan ringan dan 5 orang (10%) dengan kecemasan sedang. Kesimpulan : Terdapat perbedaan tingkat kecemasan pada pasien anastesi umum dan anastesi lokal yang dilakukan tindakan elektif gastroskopi.

Available online at
http://jurnal.usk.ac.id/riwayat/

INTRODUCTION

Endoscopy is an examination of the mucous membrane of the esophagus, stomach, and duodenum using a flexible probe equipped with a camera to produce visual images (Thakur et al., 2023).

Currently, gastrointestinal endoscopy has evolved into several types, including esophagogastroduodenoscopy, single-balloon or double-balloon enteroscopy, endoscopic retrograde cholangiopancreatography (ERCP), endoscopic ultrasound (EUS), and colonoscopy. Gastrointestinal Endoscopy (GI) is a detailed examination using a camera located at the tip of the scope to assess the mucosa of the upper and lower digestive tract. This equipment is not only used for diagnostic purposes but also for therapeutic procedures (Daldiyono et al., 2020).

Gastrointestinal endoscopy is considered safe and has many applications, such as accurate diagnosis and efficient guidance for upper gastrointestinal conditions. Although gastrointestinal endoscopy can be well understood, patients may experience anxiety due to the process of inserting the probe through the oral cavity and into the stomach, which can cause apprehension and fear due to discomfort, unfavorable diagnostic results, and inadequate sedation (Wiratmo et al., 2022).

Lack of knowledge about the procedure, potential side effects, or the expected results of the examination can lead to anxiety in patients undergoing gastrointestinal endoscopy. Patient anxiety is triggered by fear, pain, discomfort, as well as insufficient information and expected outcomes during the process (Sander et al., 2023). Intravenous anesthesia and analgesics are administered to reduce anxiety and discomfort in gastroscopy patients (Redho & Hasrianto, 2022).

Research has shown that anxiety levels before endoscopy procedures are relatively high among patients, and therefore, education is needed to reduce patient fears and concerns (Behrouzian et al., 2017).

METHODS

This research is an observational analytical study using a cross-sectional study design. The study will be conducted at Medan and Deli Serdang hospitals, namely RSU. Royal Prima and RS. Grandmed / RSU. Sembiring Deli Tua, from April 2023 to June 2023.

The population in this study includes all patients undergoing gastroscopy at RSU. Royal Prima and RS. Grandmed / RSU. Sembiring Deli Tua, conducted from April 2023 to June 2023. The total population of patients undergoing gastroscopy at RSU. Royal Prima and RS. Grandmed / RSU. Sembiring Deli Tua is 270 individuals in the last 3 months. The type of sample used in this research is Consecutive Sampling, where all eligible samples that come during the specified period are included in the study until the required sample size is met (Sastroasmoro, 2022). The required sample size for this study is 50 patients undergoing gastroscopy with local anesthesia and 50 patients undergoing gastroscopy with general anesthesia.

Inclusion criteria

1. Patients undergoing gastroscopy with general anesthesia at RSU. Royal Prima and RS. Grandmed / RSU. Sembiring Deli Tua.
2. Patients undergoing gastroscopy with local anesthesia at RSU. Royal Prima and RS. Grandmed / RSU. Sembiring Deli Tua.
3. Patients undergoing gastroscopy with general or local anesthesia at RSU. Royal Prima and RS. Grandmed / RSU. Sembiring Deli Tua, who are willing to honestly complete the questionnaire.

Exclusion criteria

Patients undergoing gastroscopy with general or local anesthesia at RSU. Royal Prima and RS. Grandmed / RSU. Sembiring Deli Tua, who refuse to complete the questionnaire.

The research method involves primary data collection. Primary data is obtained through a questionnaire directly administered to patients undergoing gastroscopy with general or local anesthesia

at RSU. Royal Prima and RS. Grandmed / RSU. Sembiring Deli Tua.

This research uses the HARS (Hamilton Anxiety Rating Scale) questionnaire as the research instrument. There are 14 symptoms assessed with a scoring system: Score Zero = no symptoms, Score One = mild (one symptom), Score Two = moderate (two symptoms), Score Three = severe (more than two symptoms), and Score Four = very severe (all symptoms). The degree of anxiety is determined by adding up the scores from items 1 to 14, with the following results: Score < 14 = not anxious, Score 14–20 = mild anxiety, Score 21–27 = moderate anxiety, Score 28–41 = severe anxiety, and Score 42–56 = panic. The questionnaire sheet is directly administered by the researcher to the research subjects, and honesty in responding is expected.

In this study, the independent variables are general anesthesia, local anesthesia, and the dependent variable is the level of anxiety.

RESULTS AND DISCUSSION

Research Results

General demographic characteristics consisting of age and gender of subjects who are patients undergoing gastroscopy with local anesthesia and patients undergoing gastroscopy with general anesthesia yielded the following results:

Table 1. Subject Demographic Characteristics

Subject Characteristics	Frequency of Local Anesthesia	Percentage (%)	Frequency of General Anesthesia	Percentage (%)
Gender				
Male	19	38,0	27	54,0
Female	31	62,0	23	46,0
Total	50	100,0	50	100,0
Usia				
18 - 30 Years	5	10,0	11	22,0
31 – 50 tahun	17	34,0	12	24,0
31 - 50 Years	28	56,0	27	54,0
Total	50	100,0	50	100,0

Source: Data processed by the researcher

Based on the table above, the research results indicate that the majority of patients undergoing gastroscopy with local anesthesia are female, with a total of 31 individuals (62%), and the majority are aged 51 - 80 years, with a total of 28 individuals (56%). Furthermore, the research results show that the majority of patients undergoing gastroscopy with general anesthesia are male, with a total of 27 individuals (54%), and the majority are aged 51-80 years, with a total of 27 individuals (54%).

Table 2. Subject Anxiety Levels

Anxiety Level	Frequency of Local Anesthesia	Percentage (%)	Frequency of General Anesthesia	Percentage (%)
No anxiety	5	10,0	30	60,0
Mild anxiety	12	24,0	15	30,0
Moderate anxiety	25	50,0	5	10,0
Severe anxiety	8	16,0	0	0,0

Total	50	100,0	50	100,0

Source: Data processed by the researcher

Based on the table above, the research results indicate that the anxiety level in patients undergoing gastroscopy with local anesthesia is primarily moderate anxiety, with a total of 25 individuals (50%), and the majority are aged 51 - 80 years, with a total of 28 individuals (56%). On the other hand, for patients undergoing gastroscopy with general anesthesia, there is no anxiety in the majority, with 30 individuals (60%).

Table 3. Description of Demographic Characteristics of Patients Undergoing Gastroscopy with

Characteristics			**Anxiety Level**				
			No anxiety	**Mild anxiety**	**Moderate anxiety**	**Severe anxiety**	**Total**
Age	18 - 30 Years	F	1	3	1	0	5
		%	2,0	6,0	2,0	0,0	10,0
	31 - 50 Years	F	1	5	9	2	17
		%	2,0	10,0	18,0	4,0	34,0
	51 - 80 Years	F	3	4	15	6	28
		%	6,0	8,0	30,0	12,0	56,0
Total		F	5	12	25	8	50
		%	10,0	24,0	50,0	16,0	100,0
Gender	Male	F	4	7	8	0	19
		%	8,0	14,0	16,0	0,0	38,0
	Female	F	1	5	17	8	31
		%	2,0	10,0	34,0	16,0	62,0
Total		F	5	12	25	8	50
		%	10,0	24,0	50,0	16,0	100,0

Source: Data processed by the researcher

Based on the cross-tabulation calculation above, the research results show that the majority of patients undergoing gastroscopy with local anesthesia are in the 51 - 80 age group, with 28 individuals (56%), and the majority have moderate anxiety, with 15 individuals (30%). The majority of subjects are female, with 31 individuals (62%), and the majority have moderate anxiety, with 17 individuals (34%). As for patients undergoing gastroscopy with general anesthesia, their characteristics can be seen in the following table.

Table 4. Description of Demographic Characteristics of Patients Undergoing Gastroscopy with

Information			**Anxiety Level**			**Total**
			No anxiety	**Mild anxiety**	**Moderate anxiety**	
Age	18 - 30 Years	F	8	3	0	11
		%	16,0	6,0	0,0	22,0
	31 - 50 Years	F	9	2	1	12
		%	18,0	4,0	2,0	24,0
	51 - 80 Years	F	13	10	4	27
		%	26,0	20,0	8,0	54,0
Total		F	30	15	5	50

Information			Anxiety Level			Total
			No anxiety	Mild anxiety	Moderate anxiety	
		%	60,0	30,0	10,0	100,0
Gender	Male	F	20	7	0	27
		%	40,0	14,0	0,0	54,0
	Female	F	10	8	5	23
		%	20,0	16,0	10,0	46,0
Total		F	30	15	5	50
		%	60,0	30,0	10,0	100,0

Source: Data processed by the researcher

Based on the cross-tabulation calculation above, the research results show that the majority of patients undergoing gastroscopy with general anesthesia are in the 51 - 80 age group, with 27 individuals (54%), and there is no anxiety in the majority of these patients, with 13 individuals (26%). The majority of subjects are male, with 27 individuals (53%), and there is no anxiety in the majority of these patients, with 20 individuals (40%). The research conducted on patients undergoing gastroscopy with general anesthesia did not show severe anxiety levels.

To determine the difference in anxiety levels in gastroscopy patients, both with local and general anesthesia, it was observed through an independent sample t-test. The results of the data analysis are as follows.

Table 5. Independent Sample T Test of Patient Anxiety Levels

t-test for Equality of Means		Anxiety Level	
		Equal variances assumed	Equal variances not assumed
	t	7.890	7.890
	df	98	93.002
	Sig. (2 tailed)	**0.000**	**0.000**
	Mean Difference	1.220	1.220
	Std. Error Difference	.155	.155
95% Confidence Interval of the Difference	Lower	.913	.913
	Upper	1.527	1.527

Source: Data processed by the researcher

The analysis of the data above reveals that the significance value for the level of patient anxiety is 0.000 < 0.05, which means that there is a significant difference in anxiety levels between general anesthesia and local anesthesia in patients undergoing elective gastroscopy.

Discussion

Anxiety is an emotional state characterized by tension, apprehension, anger, and restlessness (Unal et al., 2012). This indicates the presence of stimulation and activates the autonomic nervous system, resulting in clinical manifestations such as increased blood pressure and tachycardia experienced by patients before endoscopy. During the procedure, this condition also spontaneously appears as a decreased tolerance for the procedure, requiring the identification of patient anxiety and its management by nurses (Wiratmo et al., 2022).

The research results showed that the majority of patients undergoing gastroscopy with local anesthesia experienced moderate anxiety, with a total of 25 individuals (50%). This result is supported by research by Rismawan, 2019, which also showed that the anxiety level of patients undergoing surgery was at a moderate level. This finding is also supported by the low socioeconomic status and education level of the patients.

The anxiety level of patients undergoing gastroscopy with general anesthesia was mostly no anxiety, with a total of 30 individuals (60%). This research result differs from a previous study conducted by Wahyuningsih et al., 2021 regarding the anxiety level of preoperative hernia patients, which was at a moderate level.

The cross-tabulation results based on anxiety level and gender show that the majority were patients undergoing gastroscopy with local anesthesia, which were females with moderate anxiety. Looking at the research results, with a total of 31 female patients (62%), of which 17 individuals (34%) had moderate anxiety. This statement is supported by the research results of Wiratmo et al., 2022, which showed that the most common gender among subjects was female. The results show that female patients experience more anxiety compared to males, which can be attributed to hormonal differences and the characteristics of males and females (Vellyana et al., 2017). It is also supported by Hou et al., 2020, who stated that women are at greater risk for psychological problems than men due to the interaction between biological factors and social determinants, including gender roles, stigma, stereotypes, and others. This statement is contrary to the research results, which show that patients undergoing gastroscopy with general anesthesia have anxiety levels categorized as no anxiety in the majority, with 20 individuals (40%), with the majority being males, with 27 individuals (54%). Therefore, it can be said that male patients with general anesthesia do not experience anxiety. This statement is also supported by Boo & Kim, 2020, which states that it is true that women tend to use coping strategies aimed at changing their emotional response to stressful situations, compared to men who use coping strategies that focus on problem-solving in dealing with stressful situations.

The research results regarding anxiety levels based on patient age show that patients undergoing gastroscopy with local anesthesia who are mostly in the 51-80 age group, with a total of 28 individuals (56%), with moderate anxiety in 15 individuals (30%). This also occurs in patients undergoing gastroscopy with general anesthesia, which shows that the majority are patients in the 51-80 age group, with a total of 27 individuals (54%), with the majority having no anxiety, occurring in 13 patients (26%). This research indicates that elderly patients are the most anxious patients. However, maturity can make an individual more capable of controlling their emotions, including their anxiety levels. A more mature individual also has better adaptability, allowing them to quickly overcome changes in their environment by controlling their anxiety levels. Maturity can also determine the ability to cope effectively with stressors, including anxiety (Stuart, 2019).

The research analysis results indicate that the significance value of patient anxiety levels is $0.000 < 0.05$, which means there is a difference in anxiety levels between patients with general anesthesia and local anesthesia undergoing elective gastroscopy. This statement also indicates that patients with local and general anesthesia experience different levels of anxiety, with patients with local anesthesia more commonly experiencing anxiety, as indicated by the dominance of patients with moderate anxiety, with 25 individuals (50%). In contrast, patients with general anesthesia do not experience anxiety, with 30 patients (60%) categorized as having no anxiety. Patient anxiety is caused by the presence of a foreign procedure to be undergone and the threat to life safety due to various surgical procedures. Furthermore, anxiety arises because patients are thinking about the results they will get from the surgery (Pardede et al., 2020).

CONCLUSION

Based on the research conducted, it can be concluded that there is a difference in

anxiety levels between patients with general anesthesia and local anesthesia undergoing elective gastroscopy. The anxiety level in patients undergoing gastroscopy with local anesthesia is mostly moderate anxiety, while in patients undergoing gastroscopy with general anesthesia, anxiety is less common.

REFERENCES

Behrouzian, F., Sadrizadeh, N., Nematpour, S., Seyedian, S. S., Nassiryan, M., & Zadeh, A. J. F. (2017). The effect of psychological preparation on the level of anxiety before upper gastrointestinal endoscopy. *Journal of Clinical and Diagnostic Research: JCDR*, *11*(7), VC01.

Boo, S., & Kim, S.-H. (2020). Career indecision and coping strategies among undergraduate students. *Journal of Hospitality & Tourism Education*, *32*(2), 63–76.

Daldiyono, D., Rani, A. A., Simadibrata, M., Syam, A. F., Fauzi, A., Makmun, D., Abdullah, M., Marki, I., & Renaldi, K. (2020). National Consensus on the Use of Sedation Drugs in the Gastrointestinal Endoscopic Procedures. *The Indonesian Journal of Gastroenterology, Hepatology, and Digestive Endoscopy*, *18*(2), 104–111.

Pardede, J., Simanjuntak, G. V., & Manalu, N. (2020). Effectiveness of deep breath relaxation and lavender aromatherapy against preoperative patient anxiety. *Diversity and Equality in Health and Care*, *17*(4), 168–173.

Redho, A., & Hasrianto, N. (2022). Hubungan Tingkat Pengetahuan Dengan Kecemasan Pasien Tindakan Endoskopi. *Al-Asalmiya Nursing: Jurnal Ilmu Keperawatan (Journal of Nursing Sciences)*, *11*(1).

Rismawan, W. (2019). Tingkat kecemasan pasien pre-operasi di RSUD dr. Soekardjo Kota Tasikmalaya. *Jurnal Kesehatan Bakti Tunas Husada: Jurnal Ilmu-Ilmu Keperawatan, Analis Kesehatan Dan Farmasi*, *19*(1).

Sander, M. A., Ferdian, A., Javier, R. M., Wicaksono, H., Munir, B., Chandrawati, P. F., & Indrasto, S. B. (2023). Characteristics of Patients with Generalized Anxiety Disorder in Hyperthyroidism Accompanied by Tonsillitis and Thyroid Eye Disease with Ecg Images of Sick Sinus Syndrome (SSS) In Children and Adults. *International Journal of Social Health*, *2*(4), 187–196.

Sastroasmoro, S. (2022). *Dasar-dasar metodologi penelitian klinis*.

Stuart, G. W. (2019). *Buku saku keperawatan jiwa*.

Thakur, S. N., Pandey, D., & Rai, S. N. (2023). Applications of photoacoustic spectroscopy and imaging in gastroenterology. In *Photoacoustic and Photothermal Spectroscopy* (pp. 571–586). Elsevier.

Unal, H., Ozcurumez, J., Saritafi, S., Korkmaz, M., & Selcuk, H. (2012). Which factors affect anxiety level before upper gastrointestinal endoscopy. *Endoscopy*, *20*(3), 67–71.

Vellyana, D., Lestari, A., & Rahmawati, A. (2017). Faktor-faktor yang berhubungan dengan tingkat kecemasan pada pasien preoperative di RS Mitra Husada Pringsewu. *Jurnal Kesehatan*, *8*(1), 108–113.

Wahyuningsih, A. S., Saputro, H., & Kurniawan, P. (2021). Analisis Faktor Kecemasan Terhadap Tingkat Kecemasan Pasien Pre Operasi Hernia Di Rumah Sakit. *Jurnal Keperawatan Jiwa*, *9*(3), 613–620.

Wiratmo, P. A., Hijriyati, Y., & Sumiati, E. (2022). Identifikasi Faktor-Faktor Yang Berhubungan Dengan Kecemasan Pasien Dalam Menjalani Endoskopi. *Journals of Ners Community*, *13*(1), 7–17.