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Quality of Life Assessment of Patients Who Suffered From Bleeding Complications After Ear, Nose, and throat Operations

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Abstract: Background: Bleeding patients after ENT surgeries, more serious bleeding might complicate with presentation of poor quality of life due to anemia, infection, and breathing problems. Objective: This study was contributed to assess clinical findings on the quality of life of patients who developed into bleeding after ENT surgeries. Patients and methods: We included clinical data for 102 patients who underwent ear, nose, and throat operations, aged between 20 and 60 years, which were collected from different hospitals in Iraq for a period ranging from February 2022 to September 2023. This study was conducted by identifying medical examinations during surgery and measurements of the patient's health in terms of measuring both the patient's quality of life and pain. Results: Our study enrolled clinical findings of Ent operations, which include operative time (min) was 90.44 ± 60.52, blood loss (ml) was 370.24 ± 165.43, blood transfusion had 32 cases, hospital stays time was 5.68 ± 2.19 days, admission to the intensive care unit, n (%) had 9 cases, mortality rate, n (%) had 2 cases, NOV % had 7 cases, rate of complications was 30.39% of cases, where the most common factors were infection with 9 cases and scarring with 6 cases, most poor items in the quality of life were psychological function with 64.22 ± 7.13 and physical function with 69.39 ± 8.73. Conclusion: Significant bleeding has a detrimental impact on a patient's quality of life due to the prolonged recovery time, postoperative discomfort, and complications such as infection spread and increased scarring, which may affect safety and daily activities.

Keywords: Postoperative bleeding; ENT; Sinus surgery; Tonsillectomy; Thyroidectomy; Postoperative complications; and Quality of life.

Introduction

Bleeding post-ear, nose, and throat (ENT) operations, especially among children, can have a major influence in the patient's quality of life (QoL) [1]. Postoperative bleeding issues, while sometimes unexpected and unpreventable, are an important worry, including over 20% for hemorrhages occurring

on weekends [2] [3]. Inherited coagulopathies were rare and challenging to determine, highlighting the importance of thorough coagulation testing when bleeding occurs [4] [5]. While preoperative treatments may not considerably enhance the situation, efforts should be directed toward enhancing postoperative care as well as educating patients and their parents on bleeding risks along with emergency protocols in order to reduce the impact of bleeding on quality of life [6-8]. In addition, studies have shown that primary sinonasal operations may improve quality of life outcomes, with elevated preoperative symptom levels predicting positive postoperative QoL outcomes. [9]

Post-operative bleeding had an important impact on the patient's healing process, extending stay in the hospital, raising the risk for complications, and may result in life-threatening circumstances. According to studies, bleeding is a common consequence in a variety of surgical operations, with reasons ranging from technical mistakes to specific conditions, including COVID-19, which can worsen bleeding tendencies [3, 5, 10, 11], where lowering bleeding risks, patient blood management during operations is really important. So that blood loss can be minimized with the help of tranexamic acid and transfusion assessment procedures, it is important to recognize and deal with anemia early enough [12]. In various types of surgery, there is a concern about bleeding after surgery, with reference to postoperative bleeding identified in different causes [13]. Surgeries like lung resections, pancreatoduodenectomy or bariatric Mini gastric bypass, and Roux-En-Y Gastric Bypass are known to end with bleeding as one of their commonest complications [14], which more than 80% of unplanned returns to the operating room are as result of post-operative bleeding due to post-operative bleeding during lung cancer surgery [15]. Similarly, severe cases of post-pancreatoduodenectomy hemorrhage are often associated with bleeding from vascular pseudoaneurysms in patients undergoing the pancreaticoduodenectomy procedure [16]. In addition, Sleeve Gastrectomy and RYGB are types of weight loss surgeries, suggesting that postoperative bleeding arises as a result of surplus blood in staple lines, blood vessels, or any part of the alimentary canal and should therefore be managed with haste so as to avoid disastrous outcomes. This means medical practitioners must know the usual reasons why such happens in order for them to adopt some preventive strategies, as well as interventions at the right time for prevention of hazards associated with this kind of bleeding during surgical operation. [17]. In order to minimize the incidence of bleeding following an endoscopic papillectomy (EP) [18], after a pancreaticoduodenectomy, bands of omentum and ligaments were tied around the regional vessels, while a more advantageous method to prevent postoperative bleeding is by using collagen fleeces for suturing in dental extraction injuries, especially for those on anticoagulant drugs. In this broad approach tailored to different surgeries and patient scenarios, hemostatic local therapies based on collagen patching have also been included to reduce the occurrence of postoperative bleeding [20].

Patients and methods

We had performed a cross-sectional study related to 102 patients, which conducted ear, nose, and throat operations, including three kinds of surgeries, which consists of sinus surgery, which had 33 patients; tonsillectomy, which had 29 patients; and thyroidectomy, which had 40 patients. Clinical data were collected from different hospitals in Iraq for a period ranging from February 2022 to September 2023. Data related to demographic and clinical characteristics were recorded, which included age (20 - 60) years, gender, body mass index (BMI), which was classified into < 24.5, 24.5 - 27.5, > 27.5, ASA%, smoking status, level of education, and the patient's monthly income.

We conducted clinical examinations and diagnoses for patients, where the level of severity of the disease was determined in terms of severe, moderate, and mild, the types of surgery, concomitant diseases, and symptoms. The location, severity, and type of injury were determined by examining patients with imaging tests, which included ultrasound, CT scan, and magnetic resonance imaging.

Regarding the results and patient data during and after the surgical operation, all patients underwent clinical surgeries, where surgical data was determined, which includes the time of the surgical operation, the number of cases that suffered from bleeding, the amount of blood loss, examinations, the rate of patients admitted to the intensive care unit, and the death rate. And time of stay in the hospital.

All patients underwent multiple questionnaires that included the pain rating using the VAS scale, which ranged from 0 to 10, where 0 represented no pain and 10 represented severe pain. In addition, this study evaluated patients' quality of life, which ranged from 0 to 100, where 0 indicates poor quality of life and 100 indicates high quality of life.

Results Table 1: Demographic characteristics of patients.

Characteristics	Patients [n = 102]	Percentage [%]
Age, years		
20 – 29	24	23.53%
30 – 39	41	40.20%
40 – 49	17	16.67%
50 - 60	20	19.61%
Gender		
Male	57	55.88%
Female	45	44.12%
BMI, Kg/m2		
< 24.5	34	33.33%
24.5 – 27.5	40	39.22%
> 27.5	28	27.45%
ASA %		
I	18	17.65%
II	35	34.31%
III	38	37.25%
IV	11	10.78%
Smoking status		
Yes	42	41.18%
No	60	58.82%
Education status		
Elementary	13	12.75%
Secondary	27	26.47%
College/university	62	60.78%
Employment status		
Employed	40	39.22%
Non – employed	62	60.78%
Income status, $		
< 820	60	58.82%
820 – 1100	30	29.41%
> 1100	12	11.76%

Table 2: Diagnostic findings.

Variables	Patients [n = 102]	Percentage [%]
ENT operations		
Sinus surgery	33	32.35%
Tonsillectomy	29	28.43%
Thyroidectomy	40	39.22%
Degree of severity		
Mild	14	13.73%
Moderate	34	33.33%
Severe	54	52.94%
Comorbidities		
Hypertension	56	54.90%

Diabetes	23	22.55%
Asthma	14	13.73%
Allergies	32	31.37%
Cardiovascular diseases	3	2.94%
Obesity	26	25.49%
Kidney diseases	3	2.94%
Symptoms		
Sinus surgery	33	32.35%
Nasal congestion	12	11.76%
Fatigue	5	4.90%
Headaches	2	1.96%
Coughing	4	3.92%
Reduced sense of smell and taste	10	9.80%
Tonsillectomy	29	28.43%
Sore throat	8	7.84%
Difficulty swallowing	10	9.80%
Fever	6	5.88%
Bad breath	3	2.94%
Chronic cough	2	1.96%
Thyroidectomy	40	39.22%
Difficulty swallowing	16	15.69%
Hoarseness or voice changes	4	3.92%
Difficulty breathing	14	13.73%
Fatigue	7	6.86%
Weight changes	3	2.94%
Changes in mood	5	4.90%
Family history		
Yes	37	36.27%
No	65	63.73%
Imaging test		
Ultrasound	48	47.06%
CT scan	30	29.41%
MRI	24	23.53%

Table 3: Surgical outcomes.

Surgical data	Patients [n = 102]	Percentage [%]
Operative time (min), mean±SD	90.44 ± 60.52	
Blood loss (mL), mean±SD	370.24 ± 165.43	
Blood transfusion, n (%)		
Yes	32	31.37%
No	70	68.63%
Vital signs tests		
Systolic blood pressure, mmHg	97.92 ± 10.37	
Diastolic blood pressure, mmHg	72.53 ± 14.66	
Heart rate beats per minute	87.44 ± 9.11	
Hospital stays time (day), mean±SD	5.68 ± 2.19	
Admission to the intensive care unit, N (%)		
Yes	9	8.82%
No	93	91.18%
Mortality rate, N (%)		

Yes	2	1.96%
No	100	98.04%
NOV %		
Yes	7	6.86%
No	95	93.14%
Follow–up time, month (mean ± SD)	Five months	

Table 4: Assessment of postoperative pain scores in the patients.

Time	Scores
2 hr	6.57 ± 1.22
6 hr	5.45 ± 0.38
24 hr	4.20 ± 1.07
2 days	3.65 ± 0.17
4 days	3.18 ± 0.58

Table 5: Postoperative complications.

Items	Patients [n = 102]	Percentage [%]
Scarring	6	5.88%
Infection	9	8.82%
NOV %	5	4.90%
Loss of sense of taste or smell	4	3.92%
Acute Headache	4	3.92%
Difficulty swallowing	3	2.94%
Total	31	30.39%

Table 6: Assessment of quality of life for patients after surgery.

Items	QoL scale
Physical function	69.39 ± 8.73
Psychological function	64.22 ± 7.13
Social and emotional aspects	74.83 ± 5.68
Daily activity	71.82 ± 6.46

Discussion

It has become known for some time from studies that have been done how much bleeding can affect the quality of life of any patient undergoing a nose, throat, or ear surgery. After tonsillectomy or adenoidectomy, one often sees postoperative haemorrhage, which may not be controlled at times, affecting different age groups differently, thus showing varying frequencies among them. [21]

Moreover, a number of studies have also indicated that giving tranexamic acid should be done before, during, and after surgery in humans undergoing functional endoscopic sinus surgery (FESS) for chronic rhinosinusitis so as to decrease blood loss during the operation, thus leading to better vision during surgical intervention and post-operation period. [22,16,13]

Moreover, emphasizing the importance of holistic patient management and psychological support in the perioperative period, studies on the quality of life (QoL) outcomes of head and neck cancer survivors after surgery have highlighted the influence of factors such as age, duration of surgery, and comorbidities on QoL outcomes. [23]

Post-surgery bleeding significantly affects the recovery process of patients by creating complications and impacting functional outcomes. It is well documented that post-operative bleeding, particularly in ENT surgeries, among others, frequently increases the hospitalization period, decreases functional scores, and escalates complications rate. [24,6,9]

Reducing bleeding-related issues is crucial in perioperative patient blood management because proper haemostasis techniques and advanced measures such as tranexamic acid aid in minimising blood loss and transfusions. [25]

In addition, the rate of surgical bleeding resulting from operational mistakes points up the importance of a comprehensive comprehension of blood clotting in order to ameliorate surgical results and minimize incidences of surgical complications following postoperative treatments that result in increased patient contentment as well as decreased medical expenses. Timely action is very important in such cases as soon as possible. We must respond promptly to save the patients' lives through preventing unexpected results caused by postoperative hemorrhage. [16,2,8,26]

Conclusion

Bleeding significantly and negatively affected patients' quality of life as a result of prolonged recovery time and severe postoperative discomfort. Excessive bleeding leads to serious complications such as the spread of infection and increased scarring, which impairs the safety of the physical aspect and daily activities.

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