Relationship Between Optional General and Regional Anesthesia Applied to Patients Undergoing Cesarean Section and Sleep Quality

Sezaryen Doğum Geçiren Kadınlarda Uygulanan Opsiyonel Genel ve Bölgesel Anestezi ile Uyku Kalitesi Arasındaki İlişki

Tuna ALBAYRAK[1] iD
Giresun University, Medical Faculty, Department of Anesthesiology and Reanimation, Giresun, Türkiye

Nurten Gülsüm BAYRAK[2] iD
Giresun Obstetrics and Gynecology Training and Research Hospital, Giresun, Türkiye

Mehmet ALBAYRAK[3] iD
Karadeniz Technical Universty Medical Faculty, Department of Obstetric and Gynecology, Trabzon, Türkiye

Sibel TEKGÜNDÜZ[4] iD
SBÜ Erzurum Şehir Hastanesi, Department of Obstetric and Gynecology, Erzurum, Türkiye

Abstract

Objective: This study aimed to explore the association between anesthesia type (spinal or general) administered during cesarean section and subsequent sleep quality in women.
Methods: This study conducted from April to August 2023, it involved 150 pregnant participants evenly split between spinal and general anesthesia groups. Patient categorization was based on the type of anesthesia received. Data collection utilized a combination of a Demographic Information and Postpartum Period Survey form, along with the Postpartum Sleep Quality Scale (PSQS). Demographic and clinical details were gathered and compared between the two anesthesia groups.
Results: Indicated a higher level of education among the spinal anesthesia group ($p < .01$). Significant differences were also observed between the groups concerning economic status and number of deliveries ($p < .01$ and $p = .01$, respectively). Interestingly, patients who underwent general anesthesia exhibited a notably higher total sleep score, demonstrating a statistically significant difference ($p < .01$). Weak but statistically significant positive correlations were found between age and number of deliveries, while a weak negative correlation was noted for economic status.
Conclusion: Our results indicated that age and general anesthesia were the independent risk factors affecting postpartum sleep quality. Given the increasing trend of women giving birth at alate age, health professionals, particularly midwives, need to be aware of the increased risk of poor sleep quality and should provide suitable advice.
Keywords: Cesarean section, general anesthesia, spinal anesthesia, postpartum, sleep quality

ÖZ

Amaç: Bu çalışmanın amacı, sezaryen sırasında kullanılan anestezi türü (genel veya spinal) ile kadınlardaki uyku kalitesi arasındaki ilişkiyi araştırmaktır.
Yöntemler: Bu çalışmaya Nisan 2023 ile Ağustos 2023 tarihleri arasında, her grupta (spinal anestezi ve genel anestezi) 75'er olmak üzere toplam 150 gebe kadın çalışmaya dahil edilmiştir. Hastalar kullanılan anestezi tekniğine göre kategorize edilmiştir. Çalışma verileri Demografik Bilgi ve Postpartum Dönemi anket formu ile Postpartum Uyku kalitesi Ölçeği (PSQS) aracılığıyla toplanmıştır. Hastaların demografik ve klinik verileri formlara kaydedilerek iki anestezi grubu arasında karşılaştırılmıştır.
Bulgular: Eğitim düzeyi spinal anestezi grubunda anlamlı olarak yüksektir ($p < .01$). Ayrıca, "ekonomik durum" ve "doğum sayısı" açısından gruplar arasında istatistiksel olarak anlamlı farklar gözlenmiştir (sırasıyla, $p < ,01$ ve $p = ,01$). Toplam uyku skoru genel anestezi geçiren hastalarda istatistiksel olarak anlamlı derecede yüksektir ($p < ,01$). "Yaş" ve "doğum sayısı" ile total uyku skoru arasında istatistiksel olarak anlamlı zayıf pozitif ($r = 0,202$, $p = ,01$ and $r = 0,185$, $p = ,02$, respectively), total uyku skoru ile uyku kalitesi arasında ise istatistiksel olarak anlamlı zayıf negatif korelasyonlar saptanmıştır ($r = -0,181$, $p = ,03$). Toplam uyku skoru ile ilişkili önemli bağımsız risk faktörleri, daha yüksek yaş düzeyi ve genel anestezi alma (spinal anestezi ile karşılaştırıldığında) olarak belirlenmiştir.
Sonuç: Bulgularımız, yaş ve genel anestezinin doğum sonrası uyku kalitesini etkileyen bağımsız risk faktörleri olduğunu göstermiştir. Geç yaşta doğum yapan kadınların artan eğilimi göz önüne alındığında, sağlık profesyonellerinin kötü uyku kalitesi riskinin arttığının farkında olması ve uygun tavsiyelerde bulunması gerekir.
Anahtar kelimeler: Sezaryen doğum, genel anestezi, spinal anestezi, postpartum, uyku kalitesi

Introduction

Cesarean section stands as one of the most frequently performed surgical procedures, with a growing number of women undergoing this process (Toledo et al., 2012). In the United States, cesarean section is carried out in approximately 30% of live births, making it the predominant surgical intervention (Betrán et al, 2007) . This procedure can be executed under either general or regional anesthesia, including options such as spinal, epidural, or a combination of both (Wong, 2010). The selection of the anesthetic approach hinges on several factors, encompassing surgical indication, operation urgency, patient and surgeon preferences, as well as the expertise of the anesthetist (Siddiqi et al. 2009).

Presently, neuroaxial anesthesia techniques represent the most prevalent means for conducting cesarean surgeries, even in circumstances traditionally suitable for general anesthesia (Paech, 2011) deemed Notably, both the American Society of Anesthesiologists and the Society for Obstetric Anesthesiology and Perinatology advocate for the consideration of spinal or epidural anesthesia over general anesthesia for the majority of cesarean deliveries (Apfelbaum et al., 2016). The advantages associated with general anesthesia encompass expeditious obstetric emergency management, induction of unconsciousness to minimize distress for parturient women. However, general anesthesia carries a principal risk of respiratory complications for both the mother and the newborn. In contrast, regional anesthesia offers benefits of decreased complications linked to general anesthesia and encourages initial bonding between the mother and the fetus (Sung et al., 2021). General anesthesia employment rates for cesarean delivery have seen a general decline.

Recently, spinal anesthesia has garnered preference over epidural anesthesia for cesarean sections due to its rapid onset, efficacy, diminished local anesthetic requisites, and reduced hospital stays (Havas et al.,2013; Yoon et al, 2017,)

Numerous studies have demonstrated that the stress stemming from surgery, postoperative pain, unfavorable hospital environmental factors, and procedure-related issues exert an influence on patient sleep quality and overall quality of life (Karagözoğlu et al., 2010). Inadequate pain management post-cesarean section has been correlated with heightened instances of chronic pain, post-traumatic stress syndrome, and disruptions in sleep quality (de Brito Cançado et al., 2012). Pain following cesarean section may lead to challenges for women, such as irregular sleep patterns and limitations on physical activities (Aktas et al., 2020). Furthermore, though rare, instances of intraoperative awareness in spinal anesthesia can lead to severe consequences, including post- traumatic stress disorder and sleep disturbances (Robins et al., 2009).

While various aspects of spinal versus general anesthesia for cesarean section have undergone scrutiny, no study has yet compared sleep quality between women undergoing cesarean section under general anesthesia versus spinal anesthesia, to the best of our knowledge. It is imperative to delve further into sleep disturbances and fatigue in order to comprehensively comprehend the connection between the chosen anesthetic technique in delivery and maternal health outcomes.

The insights gained from this research will provide valuable information for health professionals, including obstetricians, anesthesiologists, and midwives, contributing to a more informed and enhanced approach to maternal healthcare and positively impacting the overall childbirth experience. This study aims to examine sleep quality among women undergoing cesarean section, differentiating between those administered general anesthesia and those administered spinal anesthesia.

Methods

Study Type: This study was designed as a prospective descriptive study. G-power analysis was employed to determine the sample size, with a moderate effect size (d=5) and 80% power. Based on this analysis, it was determined that each group should include 64 patients. To account for potential losses, the study was conducted on a total of 150 pregnant women, with 75 in each group. Patients were categorized based on the type of anesthetic technique they received, either general or spinal anesthesia.

Sample: A total of 150 pregnant women, who presented to the Gynecology Department of Giresun Women's Health and Pediatric Diseases Training and Research Hospital and were scheduled for elective cesarean section between April 2023 and August 2023 were enrolled in the study. Inclusion criteria comprised women aged 18-45 years, categorized under American Society of Anesthesiologists (ASA I-III) risk, literate, possessing a mental state conducive to understanding survey questions, and voluntarily undergoing cesarean section. Exclusion criteria encompassed women who underwent vaginal delivery, those who were illiterate, individuals under 18 years of age, patients lacking sufficient cognitive capacity to answer questions, those with psychiatric disorders, those who underwent emergency cesarean sections, and those who underwent cesarean sections against their will or declined participation.

Data Collection: Data for this study were collected through the utilization of two tools. The Demographic Information and Postpartum Period Survey form was designed by the researchers based on relevant literature. This form consisted of 23 open-ended questions investigating demographics, educational and economic status, daily exercise routines, presence of a support person, and more, and was completed by the patients.

The Postpartum Sleep Quality Scale (PSQS), developed by Yang et al. in 2013, was employed to assess postpartum sleep quality (Yang, 2013). Comprising 14 questions, this Likert-5 scaled instrument (ranging from "never" to "always") incorporated inversely scored items for questions 1, 2, and 14. elevated scores on the scale indicated sleep-related issues, with a possible score range of 0 to 56. The Cronbach alpha coefficient for the scale was 0.81.

Ethics Considerations: The study was granted ethics approval by the local ethics committee of Giresun Training and Research Hospital (Date: 10/04/2023, No: 10.04.2023/12). All participating patients were provided with comprehensive details about the study's objective and subsequently furnished written informed consent. The study adhered to the ethical principles set forth in the Declaration of Helsinki, as revised in 2013.

Statistical Analysis: Data obtained from the study were subjected to statistical analysis using IBM SPSS version 22.0 (Statistical Package for Social Sciences, Chicago, IL, USA). The normality of variables was assessed using the Kolmogorov-Smirnov test. Continuous variables were presented as mean and standard deviation, while categorical variables were expressed as numbers and percentages. Independent t-tests were employed for the analysis of continuous variables when parametric test assumptions were met. The comparison of categorical variables was carried out using Pearson's Chi-square method. Correlation analysis for continuous variables employed the Pearson correlation test when assumptions were met, and the Spearman rho correlation test when assumptions were not met. Multivariate linear regression analysis was conducted to identify potential independent risk factors associated with total sleep score in pregnant women. A significance level of $p < 0.05$ was considered statistically significant.

Results

Upon evaluation of patients' demographic characteristics, no statistically significant differences were observed in "age," "BMI," "smoking habits," "daytime sleepiness," or "prior sleep problems"

Between the general anesthesia and spinal anesthesia groups (all p > ,05). However, the spinal anesthesia group exhibited a higher educational level (p < 0.01). Furthermore, there were statistically significant differences in "economic status" and "number of deliveries" between the two groups (both p < 0.01 and p = 0.01, respectively) (Table 1). Upon assessment of the care and support provided by the patients' relatives to both the patient and the baby during

Table 1.
Evaluation of Patient Demographic And General Characteristics According To Anesthesia Type

Parameter		General anesthesia	Spinal anesthesia	P value
Age (years)		29.6±5.4	29.5±4.6	.94
Weight (kg)		72.1±11.2	68.9±11.4	.08
Height (cm)		160.9±6.1	160.2±5.1	.41
BMI (kg/m²)		27.84±3.99	26.60±4.16	.13
Chronic disease. n(%)	No	71(94.7%)	66(88.0%)	.15
	Yes	4(5.3%)	9(12.0%)	
Smoking. n(%)	No	64(85.3%)	71(94.7%)	.06
	Yes	11(14.7%)	4(5.3%)	
Drinking tea and coffee before going to bed at night. n(%)	No	32(42.7%)	35(46.7%)	.62
	Yes	43(57.3%)	40(53.3%)	
Daily exercising. n(%)	No	56(74.7%)	60(8.0%)	.44
	Yes	19(25.3%)	15(20.0%)	
Educational status. n(%)	Primary school	19(25.3%)ᵃ	6(8.0%)ᵇ	.01
	High school	28(37.3%)ᵃ	23(30.7%)ᵃ	
	University	28(37.3%)ᵃ	46(61.3%)ᵇ	
Working status. n(%)	No	59(78.7%)	52(69.3%)	.19
	Yes	16(21.3%)	23(30.7%)	
Economical status. n(%)	Poor	1(1.3%)ᵃ	6(8.0%)ᵃ	<.01
	Middle	67(89.3%)ᵃ	50(66.7%)ᵇ	
	Good	7(%9.3%)ᵃ	19(25.3%)ᵇ	
Family type. n(%)	Nuclear	63(84.0%)	63(84.0%)	.59
	Extended	12(16.0%)	11(14.7%)	
	Crowded	0(0.0%)	1(1.3%)	
Having psychiatric support. n(%)	No	68(90.7%)	67(89.3%)	.79
	Yes	7(9.3%)	8(10.7%)	
Number of deliveries. n(%)	1	27(36.0%)ᵃ	39(52.0%)ᵇ	.01
	2	26(34.7%)ᵃ	28(37.3%)ᵃ	
	3 and more	22(29.3%)ᵃ	8(10.7%)ᵇ	
Willing conception. n(%)	No	7(9.3%)	7(9.3%)	1
	Yes	68(90.7%)	68(90.7%)	
Daytime sleeping. n(%)	No	47(62.7%)	44(58.7%)	.62
	Yes	28(37.3%)	31(41.3%)	
Previous sleep disorder. n(%)	No	67(89.3%)	65(86.7%)	.62
	Yes	8(10.7%)	10(13.3%)	

BMI=Body mass index. kg=kilogram. cm=centimeters. m=meters. Data are presented as mean±standard deviation or n(%). Each same superscript (a. b) denotes a subset of group categories that are not statistically significantly different from each other at the p: 0.05 level. t-test and Pearson Chi-square test were used in independent groups.

the postpartum period, the groups were determined to be statistically comparable across all parameters (p >.05). A significantly higher total sleep score was noted among patients in the general anesthesia group (p < .01), (Table 2).

Variables that showed significance based on univariate statistical analysis were subjected to multivariate linear regression analysis to assess potential risk factors linked to the "total sleep score" in pregnant women.

Table 2.
Postpartum Patient Characteristics And Sleep Scores By Type Of Anesthesia

Parameter		General anesthesia	Spinal anesthesia	P value
Helping relatives with household chores and similar issues in the postpartum period. n(%)	No	22(29.3%)	21(28.0%)	.86
	Yes	53(7.7%)	54(72.0%)	
Helping of the spouse with household chores and similar issues in e postpartum period. n(%)	No	13(17.3%)	8(10.7%)	.24
	Yes	62(82.7%)	67(89.3%)	
In the postpartum period. relatives take care of the baby so that the mother can sleep. n(%)	No	21(28.0%)	29(38.7%)	.17
	Yes	54(72.0%)	46(61.3%)	
In the postpartum period. spouse takes care of the baby so that the mother can sleep. n(%)	No	17(22.7%)	17(22.7%)	1
	Yes	58(77.3%)	58(77.3%)	
Total sleep score		35.05±9.18	24.95± 5.65	.01

Data are presented as mean±standard deviation or n(%). t-test and Pearson Chi-square test were used in independent groups.

When analyzing the relationship between the total sleep score and patient characteristics individually for all parameters, statistically significant weak positive correlations were observed for the "age" and "number of deliveries" parameters (r = 0.202, p = .01 and r = 0.185, p = .02, respectively). Additionally, a statistically significant weak negative correlation was found for the "economic status" parameter (r = -0.181, p = .03) (Table 3).

However, no statistically significant correlations with the "total sleep score" were identified for other parameters.

A multivariate linear regression analysis was conducted to identify potential risk factors associated with the "total sleep score" among all pregnant women included in the study.

Table 3.
The Correlations Between Total Sleep Score And Patient Characteristics

Total sleep score		
Parameter	r value	p value
Age (years)	0.202	**.01**
Weight (kg)	0.118	.15
Height (cm)	-0.043	.60
BMI (kg/m^2)	0.147	.07
Chronic disease. n(%)	0.022	.79
Smoking. n(%)	0.095	.25
Drinking tea and coffee before going to bed at night. n(%)	0.138	.09
Daily exercising. n(%)	0.017	.83
Educational status. n(%)	-0.069	.40
Working status. n(%)	-0.010	.90
Economical status. n(%)	-0.181	**.03**
Family type. n(%)	0.013	.87
Having psychiatric support. n(%)	0.004	.96
Number of deliveries. n(%)	0.185	**.02**
Willing conception. n(%)	-0.078	.34
Daytime sleeping. n(%)	-0.049	.55
Helping relatives with household chores and similar issues in the postpartum period. n(%)	0.023	.78
Helping of the spouse with household chores and similar issues in the postpartum period. n(%)	-0.139	.09
In the postpartum period. relatives take care of the baby so that the mother can sleep. n(%)	0.026	.75
In the postpartum period. the spouse taking care of the baby so that the mother can sleep. n(%)	-0.126	.12
Previous sleep disorder	0.081	.32

BMI=Body mass index. kg=kilogram. cm=centimeters. m=meters. r=correlation coefficient. Spearman rho and Pearson correlation tests were applied.

The results of the analysis indicated a significant regression model (F (6,143) = 13.87, p< ,01), with the independent variables explaining 34.1% of the variance in the dependent variable. The significant independent risk factors associated with the total sleep score were determined to be a higher age level and the administration of general anesthesia (as opposed to spinal anesthesia) (EXP (β): 0.340, 95% CI: 0.052-.628, p = .02, and EXP (β): 10.35, 95% CI: 7.822-12.883, p <.01, respectively) (Table 4).

Discussion

In this study, we examined the relationship between elective cesarean section under general anesthesia versus spinal anesthesia and postpartum sleep quality. Our findings

Table 4.
Multivariate linear regression model with Total sleep score risk factors

Risk Factor	Expectant (β) value (95% CI)	p value
Age (years)	0.340 (.052-0.628)	.02
Educational status	1.049 (-.712-2.81)	.24
Economical status	-2.559 (-5.249-7.131)	.06
Number of deliveries	-0.214 (-2.179-1.752)	.83
Anesthesia type (Spinal Anesthesia vs General Anesthesia)	10.35 (7.822 - 12.883)	<.01
CI: confidence interval		

revealed that the educational level was significantly higher among those undergoing spinal anesthesia. Moreover, middle economic income was notably lower, while high economic status was significantly higher in the spinal anesthesia group compared to the general anesthesia group. The spinal group also exhibited a significantly higher proportion of patients with one delivery, and a significantly lower proportion with three or more deliveries.

Conversely, the total sleep score was markedly higher in women who received general anesthesia. Notably, a significant weak positive correlation emerged between the total sleep score and both age and the number of deliveries, while a significant weak negative correlation was observed between the total sleep score and economic status. Independent risk factors significantly associated with the total sleep score were identified as older age and undergoing general anesthesia versus spinal anesthesia.

Globally, it is estimated that 30% to 40% of the general population is afflicted by various sleep disorders. A meta-analysis conducted on pregnant and postpartum women indicated that 44.5% of pregnant and 67.2% of postpartum women experience poor sleep quality (Yang et al, 2020). Childbearing at an advanced maternal age raises clinical concerns due to the generally high-risk nature of pregnancies in older women (Okun et al., 2009, Mori et al., 2014). Wen et al.'s study associated advanced maternal age with an increased likelihood of poor sleep quality in the postpartum period (Wen et al., 2018). This heightened risk

of poor sleep quality may be linked to natural aging. Nilsen et al. reported that sleep issues and fatigue were more prevalent among pregnant women having their first baby at an advanced age (33-38 years) in comparison to younger counterparts (18-32 years) (Nilsen et al., 2012). In a separate study by Al-Reahili et al., maternal quality of life during the postpartum period displayed negative associations with age, postpartum depression, and sleep disturbances (Al Rehaili et al., 2023). In a study from our country by Boz et al., a significant relationship between age and the Turkish Postpartum Sleep Quality Scale (T- PSQS) was established, with older age correlating with poorer sleep quality (Boz et al., 2018). Similarly, the present study underscores advanced age as an independent factor affecting the total sleep score.

Poor sleep quality has been linked to physical, social, economic, and psychological challenges (Cattane et al., 2021). Hall et al. reported that socioeconomically disadvantaged adults in the United States are more prone to habitual short sleep duration and poor sleep quality (Hall et al., 2009). Socioeconomic status emerges as a determinant influencing sleep quality in the postpartum period. It has been observed that poor sleep and postpartum depression may be more pronounced in women with socioeconomic disadvantages (Goyal et al., 2010). Several studies suggest that socioeconomically disadvantaged women encounter greater sleep disruptions during the postpartum period compared to their more advantaged counterparts (Christian et al., 2019, Doering et al., 2017). Ford et al. demonstrated that women of lower socioeconomic backgrounds are more likely to experience poor sleep quality (Ford et al., 2015). In the present study, a significant negative correlation was established between the total sleep score and economic status. Low socioeconomic status stands as a risk factor for postpartum depression, and enhancing sleep quality for these mothers could potentially prevent or alleviate depressive symptoms within this group (O'Hara, 2009, Dørheim et al., 2014).

Notably, in our study, general anesthesia (as opposed to spinal anesthesia) emerged as an independent risk factor for the total sleep score. During the post-C-section period, mothers typically require more sleep than usual. Spinal anesthesia has been touted as the preferred technique for cesarean sections when compared to general anesthesia. It not only avoids the risks associated with general anesthesia and failed intubation but also ensures effective pain management, mobility, rapid return to daily activities for new mothers, and an overall improved quality of life, including sleep quality (Ghaffari et al., 2018). General

anesthesia has been shown to alter postoperative sleep patterns, particularly in older patients following major surgery, leading to a higher incidence of sleep disturbances (Luo et al., 2020). Cronin et al. demonstrated that inhaled general anesthesia for gynecological procedures decreases nocturnal melatonin levels, which are crucial for promoting good sleep quality (Cronin et al., 2000). General anesthetics induce hypnosis, sedation, and unconsciousness by activating sleep-promoting nerve nuclei and inhibiting wake-promoting nerve nuclei in the brain (Mashour et al., 2017). Conversely, a study from Korea by Lee et al. reported no correlation between sleep quality and both general and spinal anesthesia; however, slight sleeping problems were noted in both groups (Lee, 2016).

Study Limitations

This study has certain limitations, including its relatively small sample size and single-center design. Additionally, sleep quality measurement in this study relied on self-reports, which are less accurate than objective measurement methods. Nevertheless, a notable strength of this study is its distinction as the first in the literature to compare sleep quality between patients undergoing elective cesarean sections under general anesthesia versus spinal anesthesia. We anticipate that our results will provide valuable guidance for future research endeavors on this topic.

Conclusion and Recommendations

In conclusion, our study underscores age and general anesthesia as independent factors influencing postpartum sleep quality. Additionally, economic status correlates with poorer sleep quality, particularly among disadvantaged individuals. Healthcare professionals, especially midwives, must be vigilant about the heightened risk associated with delayed maternal age and economic challenges, providing targeted guidance. Given the potential for even minor improvements to greatly benefit socioeconomically disadvantaged women, nursing practices should prioritize optimizing sleep environments. Ultimately, promoting spinal anesthesia for cesarean sections is recommended, considering its association with improved sleep quality. Midwives' crucial role in educating and supporting women in anesthesia decision-making remains pivotal, emphasizing personalized care and ongoing monitoring, especially for older and economically disadvantaged mothers undergoing general anesthesia.

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Genişletilmiş Özet

Sezaryen, özellikle Amerika Birleşik Devletleri'nde canlı doğumların önemli bir bölümünü oluşturan yaygın bir cerrahi işlemdir. Spinal veya epidural anestezi gibi genel ve bölgesel seçenekler de dahil olmak üzere çeşitli anestezi türleri altında yapılabilir. Anestezi seçimi, ameliyatın aciliyeti, hasta tercihleri ve tıbbi endikasyonlar gibi çeşitli faktörlere bağlıdır. Genel anestezi hızlı bilinç kaybına neden olup acil durumlara uygun olmakla birlikte hem anne hem de yenidoğan için solunumsal riskler taşır. Bölgesel anestezi, özellikle de spinal anestezi, güvenliği ve anne ile bebek arasında erken bağlanmayı teşvik etmesi nedeniyle giderek daha fazla tercih edilmektedir. Bu düşüncelere rağmen, anestezi seçiminin postoperatif sonuçlara, özellikle de uyku kalitesine etkisi, sezaryen bağlamında kapsamlı bir şekilde araştırılmamıştır. Yetersiz ağrı tedavisi kronik ağrıya, travma sonrası stres sendromuna ve uyku düzeninde bozulmalara yol açabileceğinden, ameliyat sonrası yeterli ağrı yönetimi çok önemlidir. Ek olarak, spinal anestezi sırasında nadir görülen intraoperatif farkındalık vakaları, uyku bozuklukları da dahil olmak üzere ciddi sonuçlara yol açabilir. Bugüne kadar genel anestezi ve spinal anestezi ile sezaryen geçiren kadınlar arasındaki uyku kalitesini karşılaştıran hiçbir araştırma yapılmadı. Anestezi tipi ile postoperatif uyku kalitesi arasındaki ilişkinin anlaşılması, kapsamlı anne bakımı için önemlidir. Bu çalışma, sezaryen geçiren kadınlarda uyku kalitesini araştırarak, genel anestezi alanlar ile spinal anestezi alanlar arasında ayrım yaparak bu boşluğu gidermeyi amaçlamaktadır. Nisan 2023 ile Ağustos 2023 tarihleri arasında, her grupta (spinal anestezi ve genel anestezi) 75'er olmak üzere toplam 150 gebe kadın çalışmaya dahil edilmiştir. Hastalar kullanılan anestezi tekniğine göre kategorize edilmiştir. Çalışma verileri Demografik Bilgi ve Postpartum Dönemi anket formu ile Postpartum Uyku kalitesi Ölçeği aracılığıyla toplanmıştır. Hastaların demografik ve klinik verileri formlara kaydedilerek iki grup arasında karşılaştırılmıştır. Eğitim düzeyi spinal anestezi grubunda anlamlı olarak yüksektir (p< ,01). Ayrıca, "ekonomik durum" ve "doğum sayısı" açısından gruplar arasında istatistiksel olarak anlamlı farklar gözlenmiştir (sırasıyla, p< ,01 ve p= ,01). Toplam uyku skoru genel anestezi geçiren hastalarda istatistiksel olarak anlamlı derecede yüksektir (p< ,01). "Yaş" ve "doğum sayısı" ile total uyku skoru arasında istatistiksel olarak anlamlı zayıf pozitif (r= 0,202, p= ,01 and r= 0,185, p= ,02, respectively), total uyku skoru ile uyku kalitesi arasında ise istatistiksel olarak anlamlı zayıf negatif korelasyonlar saptanmıştır (r= -0,181, p= ,03). Toplam uyku skoru ile ilişkili önemli bağımsız risk faktörleri, daha yüksek yaş düzeyi ve genel anestezi alma (spinal anestezi ile karşılaştırıldığında) olarak belirlenmiştir. Bu çalışmada, genel anestezi altında yapılan elektif sezaryenin, spinal anesteziye göre doğum sonrası uyku kalitesi üzerindeki etkisini araştırdılar. Kayda değer birkaç önemli ilişki ve korelasyon bulduk. Öncelikle spinal anestezi alan hastaların genel anestezi alanlara göre eğitim düzeylerinin daha yüksek olduğunu gözlemledik Ek olarak, spinal anestezi grubunda ekonomik durumu yüksek olan bireylerin oranı daha yüksek, orta ekonomik durumu olanların oranı ise daha düşüktü. Ayrıca, spinal anestezi grubunda tek doğum yapan hasta oranı daha yüksekken, genel anestezi grubunda üç veya daha fazla doğum yapan hasta oranı daha yüksekti. İlginç bir şekilde genel anestezi alan kadınlarda toplam uyku puanının anlamlı derecede yüksek olması, bu da uyku kalitesinin genel anestezi grubunda daha kötü olduğunu göstermektedir. Çalışma ayrıca toplam uyku puanı ile yaş ve doğum sayısı arasında zayıf pozitif korelasyonlar ortaya çıkardı; bu da daha fazla doğum yapan yaşlı kadınların daha kötü uyku kalitesine sahip olma eğiliminde olduğunu göstermektedir. Tersine, toplam uyku puanı ile ekonomik durum arasında zayıf bir negatif korelasyon vardı; bu da daha düşük ekonomik durumun daha kötü uyku kalitesiyle ilişkili olduğunu göstermektedir. Toplam uyku skoru ile ilişkili önemli bağımsız risk faktörleri, daha yüksek yaş düzeyi ve genel anestezi alma (spinal anestezi ile karşılaştırıldığında) olarak belirlenmiştir.Çalışma, özellikle hamile ve doğum sonrası kadınlar arasında uyku bozukluklarının ve kötü uyku kalitesinin küresel yaygınlığını vurguladı. İleri anne yaşı, muhtemelen doğal yaşlanma etkilerinden dolayı, düşük uyku kalitesi riskinin daha yüksek olmasıyla ilişkilendirildi. Biz bu çalışmada, daha iyi uyku kalitesiyle ilişkili olduğu için sezaryen operasyonlarında spinal anestezinin önemini vurguladık. Öte yandan genel anestezi, potansiyel olarak melatonin seviyeleri ve uykuyu teşvik eden sinir çekirdekleri üzerindeki etkisinden dolayı ameliyat sonrası uyku düzeninin değişmesiyle bağlantılıydı. Ancak çalışmanın küçük bir örneklem büyüklüğü ve kişinin bildirdiği uyku kalitesi ölçümlerine dayanması gibi sınırlamaları vardı. Bu sınırlamalara rağmen araştırma, doğum sonrası uyku kalitesini etkileyen faktörlere dair önemli bilgiler sağladı. Sonuç olarak bu çalışma, doğum sonrası uyku kalitesinin belirlenmesinde yaşın, anestezi tipinin (genel veya spinal) ve ekonomik durumun önemini vurgulamıştır. Sağlık çalışanlarının özellikle ileri anne yaşı ve ekonomik durumu düşük olan gebe ve lohusa kadınların uyku kalitesine dikkat etmeleri gerekmektedir. Bulgular ayrıca, daha iyi uyku kalitesiyle olan ilişkisi nedeniyle sezaryen operasyonlarında spinal anestezinin tercih edildiğinin altını çizdi. Bu bulguların doğrulanması ve genişletilmesi için bu alanda daha fazla araştırma yapılmasına ihtiyaç vardır.