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ORIGINAL ARTICLE

The Views of Urology Doctors in Turkey Towards Regional Anaesthesia

Türkiye'deki Ürologların Rejyonel Anesteziye Bakışı

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ABSTRACT

Despite regional anaesthesia (RA) being the most appropriate anaesthesia method in several surgeries, primarily urology surgery, it is not widely practised by anaesthetists. We aimed to research the knowledge, opinions and attitudes of urologists towards regional anaesthesia(RA) A questionnaire consisting of 29 questions to be answered with Likert type answers was applied face to face to urology specialists and assistants in hospitals in the center of Ankara. By stating the preferred anaesthesia method it was aimed to evaluate the knowledge and opinions of urologists to RA. A total of 152 urology assistants or specialists were included in the study. The source of the knowledge related to RA was determined as from experience during specialist training in 38%, from observation and learning from anaesthetists when working together in 25% and from medical faculty education in 25%. The most common reasons for selecting RA were determined as a better state of consciousness in the patient compared to general anaesthesia (92.8%), that it is a safe anaesthesia method (86.2%), lower rates of postoperative nausea and vomiting (73.7%) and greater patient satisfaction (73%). Reasons for not selecting RA were determined as the risk of complications developing associated with unwanted movements of the patient (45.4%) and that the patient can follow their own endovision monitor and hear the doctors talking amongst themselves, as they are conscious during surgery (40.8%). The results of this study showed that the majority of urologists knew the advantages of RA and supported the use of RA in appropriate operations. The disadvantages of the RA can be eliminated with anaesthesia applications such as sedation or nerve blockage additional to RA. Periodic training sessions between clinics and meetings may be useful both in terms of updating information and in reducing negative opinions of RA. Inter-clinical meetings and periodic training can be beneficial both in terms of updating information and reducing negative opinions about RA.

Keywords: Regional anaesthesia, Urologist, General anaesthesia

ÖZ

Rejyonel anestezi (RA) başta ürolojik cerrahiler olmak üzere birçok ameliyatta en uygun anestezi yöntemi olmasına rağmen anestezistler tarafından yaygın olarak uygulanamamaktadır. Bu çalışmada Ürologların rejyonel anestezi(RA) konusundaki bilgi, görüş ve tutumlarını araştırmayı amaçladık. Ankara merkezindeki hastanelerde üroloji uzman ve asistanlarına, Likert tipi yanıtlarla yanıtlanmak üzere 29 sorudan oluşan bir anket yüz yüze uygulandı. Ürologların tercih ettikleri anestezi yöntemi belirlenerek RA konusundaki bilgi ve görüşlerinin değerlendirilmesi amaçlanmıştır. Toplam 152 üroloji asistanı veya uzmanı çalışmaya dahil edildi. RA ile ilgili bilgilerin kaynağı olarak; %38'i uzmanlık eğitimi sırasındaki deneyimlerden, %25'i birlikte çalışırken anestezistlerden gözlem ve öğrenmeden, %25'i tıp fakültesi eğitiminden olduğu saptandı. RA'yı seçme nedenleri; hastaların genel anesteziye göre bilinç durumunun daha iyi olması (%92,8), güvenli bir anestezi yöntemi olması (%86,2), ameliyat sonrası bulantı kusma oranlarının daha düşük olması (%73,7) ve daha fazla hasta memnuniyeti (%73) olarak değerlendirildi. RA'yı seçmeme nedenleri; hastanın istenmeyen hareketlerine bağlı komplikasyon gelişme riski (%45.4) ve hastanın ameliyat sırasında bilinci açık olduğu için kendi endovizyon monitörünü takip edebilmesi ve doktorların kendi aralarında konuşmalarını duyabilmesi (40.8) olarak belirlendi. Bu çalışmanın sonuçları, ürologların çoğunluğunun RA'nın avantajlarını bildiğini ve uygun operasyonlarda RA kullanımını desteklediğini göstermiştir. RA'ya ek olarak sedasyon veya sinir blokajı gibi anestezi uygulamaları ile RA'nin dezavantajları ortadan kaldırılabilir. Klinikler arası toplantılar ve periyodik eğitimler, hem bilgilerin güncellenmesi açısından hem de RA hakkındaki olumsuz görüşlerin azaltılması açısından faydalı olabilir.

Anahtar Kelimeler: Rejyonel anestezi, Ürolog, Genel anestezi

Introduction

Despite regional anaesthesia (RA) being the most appropriate anaesthesia method in several surgeries, primarily urology surgery, it is not widely practised by anaesthetists (1, 2). The main reasons for this lack of use are that there should be conformity among surgeons, patients and the anaesthesia team. Because patients spend more time with the surgeon preoperatively, the recommendations and suggestions of the surgeon are as influential on the anaesthetist as the choice of a certain anaesthesia method.

Therefore, when the anaesthetist is not involved in the preoperative evaluation, and the surgeon has insufficient or incorrect knowledge of RA, a patient can easily be directed to the application of general anaesthesia, even when the case is suitable for RA. There have been many studies to date related to the expectations and preferences of patients. However, there have been very few studies researching the anaesthesia preferences and knowledge of RA of surgeons, which would shed further light on the subject. Studies of this subject in the literature have generally been conducted with orthopaedists and have been limited in number (3). To the best of our knowledge, there are no previous

studies in literature related to the subject of this current research, in which the knowledge, opinions and attitudes of urologists towards RA are examined.

Material and Methods

The study was conducted between July 2013 and October 2013 after approval from the Ethics Committee of Ankara Numune Training and Research Hospital (meeting no: 30/2013; date: 26.06.2013).

Urology specialists and urology assistants working in state hospitals in the centre of Ankara were interviewed face to face. The questionnaire, which is attached in Appendix 1, was administered to the volunteer participants of the study.

The questionnaire consisted of 29 questions: 4 in section 1, 10 in section 2 and 15 in section 3. In the first section, the age, information about the institution where the respondent worked and educational status of the participant was asked. In the second section, the anaesthesia method (regional anaesthesia, general anaesthesia, regional + general anaesthesia) that the urologist would select for a patient undergoing ureterorenoscopy, transurethral bladder tumour resection, transurethral prostate resection, open transvesical prostatectomy and genital surgery was asked, as well as which of the same three methods the urologist would prefer if they were undergoing the same operations. In the third section of the questionnaire, questions were asked with responses using a 5-point Likert scale to ascertain the urologist's opinions of the advantages and disadvantages of regional anaesthesia.

Statistical analysis

The data were analysed using the SPSS (Statistical Package for the Social Sciences Inc., Chicago, IL, USA) software program, version 16.0 for Windows. The chi-square test and Fisher's exact test as non-parametric methods were used in the comparison of two non-continuous variables. To evaluate missing data in the chi-square analysis, the Monte Carlo simulation method was used. A value of $p<0.05$ was accepted as statistically significant.

Results

The study included a total of 152 urologists working in state hospitals in the centre of Ankara. The data, including the age, gender and urology experience of the participants, are shown in Table 1.

The participants were questioned regarding the source of their knowledge related to RA, and they could select one or more responses to this question. Of the total of 152 participants, 94 (61.8%) indicated that it was experience during their specialist training, 62 (40.8%) said it was collaboration with anaesthesia department colleagues, 62 (40.8%) said it was medical faculty training, 23 (15.1%) said it was articles and books related to RA, 4 (2.6%) said it was seminars, and 2 (1.3%) reported other sources. Both of these participants who reported other sources had worked as anaesthesia assistants for approximately 1 year before urology specialist training.

The sources from which urology specialists obtained information related to RA are shown in Figure 1.

Reliability analysis was applied to the questionnaire, which asked the preferred anaesthesia methods of the urologists both for patients and themselves in different urological operations. No item on the questionnaire was found to have a Cronbach's alpha (α) coefficient less than 0.20. Because these 10 items had high reliability values, no item was removed from the questionnaire. Then, the reliability coefficients of the questionnaire were examined. In the calculation of reliability coefficients, differences are shown according to the type of variable and the source and number of applications. Differences in methods of calculation change the interpretation of the reliability coefficient. The reliability coefficient provides information regarding the extent of removing random errors and the amount of error confused with measurement results. Although values are considered to range between 0 and +1, reliability requires values close to +1. The desired result is a reliability coefficient greater than 0.70. The calculated Cronbach's α reliability coefficient for the 10 items on the questionnaire used in the research was 0.875. Because this coefficient was greater than 0.70, the questionnaire could be said to have strong reliability (Table 2).

Table 1: Demographic characteristics.

		n (%)
Sex		
	Male	152 (100)
	Female	0 (0)
Age (yrs)		
	≤30	56 (36.8)
	31-40	57 (37.6)
	41-50	26 (17.1)
	51-60	11 (7.2)
	≥61	2 (1.3)
Urology experience (yrs)		
	≤5	63 (41.4)
	6-10	34 (22.4)
	11-15	33 (21.7)
	16-20	13 (8.6)
	21-25	6 (3.9)
	≥26	3 (2.0)

Table 2: Reliability coefficients of the questionnaires applied in the study

	Number of items	Reliability coefficient (Cronbach's alpha)
1st questionnaire	10	0.875
2nd questionnaire	15	0.732

Table 3: Anaesthesia preferences of the urologists for patients and for themselves.

		Regional Anaesthesia - n (%)	General Anaesthesia - n (%)	RA + GA n (%)	P value
Ureterorenoscopy operation for stones in the lower third of the ureter	D	42 (27.6)	104 (68.4)	6 (3.9)	0.001*
	P	33 (21.7)	113 (74.3)	6 (3.9)	
TUR-M operation for bladder tumour	D	68 (44.7)	78 (51.3)	6 (3.9)	0.001*
	P	70 (46.1)	73 (48)	9 (5.9)	
TUR-P operation for BPH	D	105 (69.1)	40 (26.3)	7 (4.6)	0.001*
	P	110 (72.4)	31 (20.4)	11 (7.2)	
Open prostatectomy for BPH	D	49 (32.2)	92 (60.5)	11 (7.2)	0.001*
	P	47 (30.9)	91 (59.9)	14 (9.2)	
Surgery in the genital region	D	98 (64.5)	46 (30.3)	8 (5.3)	0.002*
	P	93 (61.2)	49 (32.2)	10 (6.6)	

D: the preference of the doctor for him- or herself; H: the preference of the doctor for the patient; RA+GA: Reginal anaesthesia + general anaesthesia. *p<0.05; for comparisons between the D and P groups, the Mann Whitney U test and the t-test were used.

Reliability analysis was applied to the 15 Likert-type items on the questionnaire, which examined the reasons for selecting or not selecting regional anaesthesia. No item was found to have a Cronbach's alpha (a) coefficient less than 0.20. Because these 15 items had high reliability values, no item was removed from the questionnaire. Then, the reliability coefficients of the questionnaire were examined. The Cronbach's a reliability of the Likert scale from 1 to 5 for each item indicated reliability in the sense of internal reliability. The Cronbach's a reliability coefficient calculated for the 15 items on the questionnaire used in the research was 0.732. Because this coefficient was greater than 0.70, the questionnaire could be said to have strong reliability (Table 2).

The preferences of anaesthesia methods of the urologists participating in the study for patients and themselves for different urology operations are shown in Table 3.

The reasons of the urology doctors for the selection of RA are shown in Figure 2. According to these findings, the reasons for selection were a good postoperative state of consciousness of the patient and that RA is a safe anaesthesia method.

The reasons of urology doctors for not selecting RA are shown in Table 3. According to these findings, the reasons for not selecting RA were the perceived possibility of complications developing associated with movements of the abdomen or lower extremities and that the patient can hear the surgical team talking amongst themselves and can see the endovision monitor.

Discussion

In this study, which was applied to research the knowledge, opinions and attitudes of urologists towards RA, it was determined that the source of knowledge about RA for urology doctors was most often experience during specialist training (38%), followed by observation and collaboration with anaesthetist colleagues (25%). In addition, a small proportion of the study participants reported the sources of their knowledge as medical articles and books (9%) and seminars (2%), which are actually the most current and accurate sources. In a study by Akçaboy et al.(1), in which a questionnaire was administered to orthopaedists, articles, books and seminars to determine the source of knowledge related to RA, the same low rates were reported as by the urologists in the current study. These results suggested that, in Turkey in general, doctors in different surgical specialities do not have a sufficient level of current and accurate knowledge of RA. Periodic training sessions and collaboration between clinics oriented towards eradicating this deficiency would also increase understanding between surgeons and anaesthetists.

In the current study, the preference of anaesthesia methods of urologists for patients and themselves in different urology operations was researched. Generally, RA was not selected by the urologists in the study for ureteroscopy in the treatment of stones in the lower third of the ureter for either patients or themselves. In addition, it was determined that GA was preferred at a statistically significantly higher rate for patients than for the urologists themselves. However, in several studies, it has been reported that there was no increase in complications in ureterorenoscopy operations performed under RA and that it was well tolerated by patients (4, 5). The underlying reasons for the lower preference by urologists of RA as the anaesthesia method in ureteroscopy operations could be that, during these operations, there is sometimes the need to advance the ureteroscope as far as the upper third of the ureter; there can be concerns such as not being able to prevent renal pain at the level of the regional block applied, and unwanted ureter trauma can develop associated particularly with not being able to keep respiratory activity under complete control.

As in ureteroscopy operations, it was determined that, in open prostatectomy surgery, the urologists generally preferred GA. The choice of RA+GA was selected at a much higher rate for open prostatectomy surgery

than for other types of operations, and the rate of the preference for RA+GA was greater for patients than for themselves. The underlying reason for not selecting RA alone for open prostatectomy might be that, because the patient is awake during RA, it is thought that there might be difficulties working in the surgical field because of abdominopelvic muscle contractions, which cannot be curarised, and there will therefore be a narrower field of vision.

However, in patients undergoing open prostatectomy with RA, there are known to be advantages, such as less urethral tenesmus, pain and pain-related hypertension in the early stage, less need for blood transfusion and less need for re-operation in the early postoperative period (6). To benefit from these postoperative early period advantages provided by RA in open prostatectomy operations, combining GA with RA by the anaesthetist will become a more preferred method than RA for urologists performing open prostatectomy.

In the application of TUR-M surgery for bladder tumours, it was noted that, while urologists selected GA for themselves, their preference for patients was RA or RA+GA. This finding suggested that the urologists had concerns about the risk of complications associated with movement when the patient was conscious and that the endovision monitor could be observed; therefore, they preferred GA for themselves. In TUR-P operations applied for BPH and surgery in the genital region, RA was the preferred anaesthesia method both for themselves and for patients, although in these operations, the anaesthesia method preferred for patients was sometimes not the one preferred for themselves. More detailed studies are required to shed light on the underlying reasons for this difference.

The primary reasons for the urologists participating in the current study not selecting RA were the possibility of complications, such as perforation, occurring in areas such as the ureter, bladder or prostate capsule due to unexpected movements of the patient. These types of complications in particular can be due to adduction movements in the leg associated with stimulation of the obturator nerve during resection of the prostate lateral lobes or tumours located in the lateral bladder walls. In addition to a set of precautions that can be undertaken by surgeons to prevent complications that might develop in this way, applications by anaesthetists, such as obturator nerve blockage in addition to RA, can be effective.

In a study by Tatlisen et al. (7) of obturator nerve blockage applied in 61 patients with tumours located in the lateral bladder wall, it was reported that there was no adduction movement in 59 patients. In another study by Jo et al., pubic or inguinal route obturator nerve blockage was applied following spinal anaesthesia for TUR-M surgery, and it was reported that injections could be administered more easily from the inguinal region and that reduction in the adductor reflex was more successful (8). Among the reasons for not selecting RA were primarily the provision of a more comfortable working environment for the urologists during surgery, with the application of sedation aimed at preventing complications that could occur due to hand and arm movements, as well as the patient talking during surgery.

Another reason for the urologists not preferring RA was that, if sedation were applied to conscious patients using RA alone, the patient would be able to hear the surgical team talking amongst themselves and be able to observe the endovision monitor. One of the reasons given by the urologists for not selecting RA was that, in lengthy operations, there might be the need to convert from RA to GA. The application of an epidural catheter so that anaesthesia can be continued by that route if there is a need for an additional dose can be beneficial, if applied prior to surgeries with the potential of being lengthy and if the patient is informed by the surgeon.

In a study by Oldman et al. (9), the primary reasons for orthopaedists not preferring RA were that RA takes a long time and thus slowed down operating theatre turnover time. Similarly, Akçaboy et al. (1) revealed comparable results in a study conducted with orthopaedists. Although the reason for the slower operating theatre turnover was not at the forefront of the reasons for not preferring RA in the current study, it was seen as a disadvantage by the urologists. Oldman et al. (9) reported that a solution for this issue was the application of RA in a separate room, which would require the creation of a separate RA team. However, in another study, it was shown that a separate RA team and room did not expedite the operating theatre turnover time, and it increased the anaesthesia-related costs (10). There are several factors that slow down operating theatre turnover. These factors are not only anaesthesia-related, but they can be associated with the surgeon, nurses or other assistant personnel. Training activities, including all of the operating theatre personnel, could accelerate the operating theatre turnover time. In the application of RA by anaesthetists, undertaking some steps, such as the use of local anaesthetic agents with rapid onset of effects, can provide the possibility of a more rapid start to surgery. Apart from these suggestions, it is obvious that deficiencies in the knowledge and experience of anaesthetists will extend the operating theatre turnover time.

In studies related to the problems of anaesthesia training, it has been reported that the doctors in training could not perform sufficient RA applications during training, and they therefore lacked experience in this subject (11, 12). Although previous studies have suggested that a separate block room and a separate RA team are not very effective in shortening operating theatre turnover time, we are of the opinion that, particularly for assistant doctors, RA training in a separate block room led by a separate RA team would at least reduce the experience and knowledge deficiencies to a minimum.

The factors with the most significant effects on the preferences of urologists for RA were, respectively, a better postoperative state of consciousness (less sedation and confusion), greater safety compared to GA, less nausea and vomiting, greater patient satisfaction, less postoperative pain compared to GA and lower rates of thromboembolism. It was determined that the urologists had general knowledge about several advantages of RA, which have been proved in various studies. In addition, there have been several studies supporting that there is better bleeding control in patients under RA, particularly in orthopaedic surgery, in which there can be more problems with bleeding (13, 14).

However, it cannot be definitively said that, in urology surgery, there is less blood loss in patients under RA than in those under GA. There has not yet been consensus in studies on this topic. It has been suggested that the advantage of bleeding control with RA compared to GA is valid in open prostate surgery in particular (radical prostatectomy or open prostatectomy) (5, 6, 7). In urological endoscopy surgery, there is a more dominant view that RA offers no advantages over GA in terms of bleeding control (8, 9). In the current study, it was determined that the urologists did not believe that there was any advantage to RA in urology surgery in terms of bleeding control. This finding might have been due to the young ages of the urologists participating in this study: 74.4% of the participants were younger than 40 years old, and because open surgery is not currently performed as much as endoscopic surgery in urology, the respondents might have been thinking of endoscopic surgery.

In conclusion, it was determined from this research that the majority of urologists were aware of the advantages of RA and supported the use of RA in appropriate operations. The most significant obstacle to RA for urologists was the possibility of complications developing due to movements of the patient during the operation and that the conscious patient would be able to hear the surgical team talking and be able to observe the endovision monitor. These disadvantages could be eliminated with anaesthesia applications such as sedation and nerve blockage, in addition to RA. Although previous studies have reported the most important disadvantage of RA to be the slowing of operating theatre turnover time, it was not seen as a significant disadvantage by the urologists in the current study.

Although there are several known advantages of regional anaesthesia, even in appropriate operations, it cannot be applied as often as desired, sometimes for patient-related reasons and sometimes because of the surgeon's prejudice against RA. Periodic training and meetings between clinics would be useful in terms of both updating knowledge and reducing the negative opinions of surgeons towards RA.

References

1.Akçaboy EY, Akçaboy ZN, Ekren D, Göğüş N. Bir Eğitim ve Araştırma Devlet Hastanesinde Ortopedistlerin Rejyonal Anestezi ile İlgili Tutum ve Bilgilerinin Değerlendirilmesi. Turkiye Klinikleri J Anest Reanim 2009;7(3): 143-7

2.Ngan Kee WD, Hung VY, Roach VJ, Lau TK.A survey of factors influencing patients' choice of anaesthesia for caesarean section. Aust N Z J Obstet Gynaecol 1997;37(3):300-3.

3.Masursky D, Dexter F, McCartney CJ, Isaacson SA, Nussme-ier NA. Predicting orthopedic surgeons' preferences for peripheral nerve blocks for their patients. Anesth Analg. 2008 Feb;106(2):561-7.

4.Park HK, Paick SH, Oh SJ, Kim HH. Ureteroscopic lithotripsy under local anaesthesia: analysis of the effectiveness and patient tolerability. Eur Urol. 2004 May;45(5):670-3.

5.Shaikh AH, Khalid SE, Zaidi SZ. Ureteroscopy under spinal versus general anaesthesia: morbidity and stone clearance. J Coll Physicians Surg Pak. 2008 Mar;18(3):168-71.

6.Fasciolo A, Baldini C. Transvesical prostatic adenomectomy: general or local anaesthesia. Urologia. 2008;75(4):221-227.

7.Tatlisen A, Sofikerim M. Obturator nerve block and transurethral surgery for bladder cancer.Minerva Urol Nefrol. 2007;59(2):137-41.

8.Jo YY, Choi E, Kil HK. Comparison of the success rate of inguinal approach with classical pubic approach for obturator nerve block in patients undergoing TURB. Korean J Anesthesiol. 2011;61(2):143-7.

9.Oldman M, McCartney CJ, Leung A, Rawson R, Perlas A, Gadsden J, et al. A survey of orthopedic surgeons' attitudes and knowledge regarding regional anaesthesia. Anesth Analg 2004;98(5):1486-90

10.Eappen S, Flanagan H, Lithman R, Bhattacharya N. The addition of a regional blockteam to the orthopedic rooms does not improve anaesthesia controlled times and turnover time in the setting of long turnover times. J Clin Anesth 2006;19(2):85-91.

11.Smith MP, Sprung J, Zura A. A survey of exposure to regional anaesthesia in American anaesthesia residency training programs. Reg Anesth Pain Med 1999;24(2):11-6.

12.Kopacz DJ, Neal JM, Pollock JE. The regional anaesthesia "Learning Curve": what is the minimum number of epidural and spinal blocks to reach consistency? Reg Anesth 1996;21(3):182-90.

13.Juelsgaard P, Larsen UT, Sørensen JV, Madsen F, Søballe K. Hypotensive epidural anaesthesia in total knee replacement without tourniquet: reduced blood loss and transfusion. Reg Anesth Pain Med. 2001;26(2):105-10.

14.Niemi TT, Pitkänen M, Syrjälä M, Rosenberg PH. Comparison of hypotensive epidural anaesthesia and spinal anaesthesia on blood loss and coagulation during and after total hip arthroplasty. Acta Anaesthesiol Scand. 2000;44(4):457-64.

APPENDIX 1

Dear urology colleague,

We are conducting a questionnaire study to evaluate the knowledge and attitudes of urologists working in state hospitals in the centre of Ankara towards the application of regional anaesthesia in surgical approaches to the urinary system.

The responses provided to the 27-question questionnaire and your personal information will remain confidential. Participation in the study is on a completely voluntary basis. If you wish to participate in the study, please provided your name and signature in the relevant section below.

We thank you for your time and assistance.

Participant Name – Surname Signature

Institution where you work						
Age						
How many years have you been working as a urologist?	<5 yrs	5-10 yrs	10-15 yrs	15-20 yrs	20-25 yrs	>25 yrs
What is the source of your knowledge of RA?	Experience during specialist training	Colleagues in the anaesthesia dept.	Medical faculty training	Articles and books related to RA	Seminars	Other

	Regional Anaesthesia	General Anaesthesia	RA + GA
1 - If you were undergoing ureterorenoscopy surgery for stones in the ureter lower third, which anaesthesia method would you select for yourself?			
2 - If you were undergoing TUR-M surgery for bladder tumour, which anaesthesia method would you select for yourself?			
3 - If you were undergoing TUR-P for BPH, which anaesthesia method would you select for yourself?			
4 - If you were undergoing open prostatectomy for BPH, which anaesthesia method would you select for yourself?			
5 - If you were undergoing genital surgery, which anaesthesia method would you select for yourself?			
6 - For a patient undergoing ureterorenoscopy surgery for stones in the ureter lower third, which anaesthesia method would you select?			
7- For a patient undergoing TUR-M surgery for a bladder tumour, which anaesthesia method would you select?			
8 - For a patient undergoing TUR-P surgery for BPH, which anaesthesia method would you select?			
9 - For a patient undergoing open prostatectomy for BPH, which anaesthesia method would you select?			
10 - For a patient undergoing genital surgery, which anaesthesia method would you select?			

NB: The application of regional anaesthesia and general anaesthesia was decided with the intention of reducing postoperative pain.

	Definitely agree	Agree	Neither agree nor disagree	Disagree	Definitely disagree
1 - I prefer RA because lower rates of thromboembolism complications are seen in patients receiving surgery under RA.					
2 - I prefer RA because bleeding control is better in patients receiving surgery under RA.					
3 - I prefer RA because lower rates of postoperative nausea and vomiting are seen in patients receiving surgery under RA.					
4 - I prefer RA because lower rates of postoperative pain are seen in patients receiving surgery under RA.					
5 - I prefer RA because it is a reliable method of anaesthesia in surgical interventions in the lower urinary system.					
6 - I prefer RA because the postoperative consciousness status is better in patients receiving surgery under RA.					
7 - I prefer RA because patient satisfaction is greater in patients receiving surgery under RA.					
8 - I prefer RA because perioperative surgical complications, such as bladder or prostate capsule perforation, can be diagnosed more easily in patients receiving surgery under RA.					
9 - I do not prefer RA because the application is time-consuming and it slows down the operating theatre turnover time.					
10 - I do not prefer RA because there is a high possibility of failure and having to transfer to GA.					
11 - I do not prefer RA as preoperative and postoperative anxiety has been seen to be greater in patients undergoing surgery with RA.					
12 - I do not prefer RA because, during application, total spinal block can develop, and there will then be a need for general anaesthesia.					
13 - I do not prefer RA because conscious patients can hear the surgical team talking among themselves and can observe the endovision monitor.					
14 - I do not prefer RA because there is a risk of complications, such as perforations, occurring due to abdominal or lower extremity movements.					
15 - I do not prefer RA because, when the operating time is extended, the regional anaesthetic effect will not be sufficient, and it will be necessary to transfer to general anaesthesia.					