

Do Obstetric Patients Opt to Undergo General Anaesthesia to Avoid Being Conscious Despite Safer Alternatives?

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Abstract

There are various modes of anaesthesia available in the community today. This gives anaesthesiologists the freedom to select those that are safe, efficacious and most suitable for patients. However, patients may not always agree with their anaesthesiologist on the preferred mode of anaesthesia because they may have a different set of priorities, with many of them electing to have the lack of intraoperative awareness as the primary objective. Hence, disagreements between anaesthesiologists and patients may arise and could potentially disrupt doctor-patient relationship. This paper attempts to explore the possible reasons for obstetric patients championing for certain modes of anaesthesia and to provide an insight into the need for adequate patient education.

Ann Acad Med Singapore 2017;46:248-51

Key words: Ethics, Safety, Informed Consent, Patient Preference, Intraoperative Awareness, Preoperative Anxiety

Introduction

Anaesthesia today comes in many forms, ranging from a local injection of anaesthetics to numb the skin, a nerve block to provide anaesthesia to a region of the body, to general anaesthesia (GA) in which the patient is rendered unconscious. From an anaesthesiologist's perspective, patient safety comes first and hence, some options of anaesthetic delivery are favoured over others. However, the same cannot be said from the patient's perspective where comfort and lack of intraoperative awareness are top priorities. Patients are generally afraid of surgeries and do not wish to have any recollection. Hence, many patients would generally prefer GA over regional anaesthesia (RA). This is despite the fact that receiving GA could arguably be more dangerous and life-threatening to the patient. This begs the question, "Do obstetric patients opt for a more dangerous mode of anaesthesia just so that they prevent recollection from the surgery?" This paper serves to expound on the rationales of patients, and the methods that can be attempted in order to minimise differences in opinion between patients and physicians.

The significance of this paper extends into many aspects of medicine. We shall be focusing on obstetric anaesthesia to help elucidate the differences in priorities and opinions between physicians and patients. In obstetric anaesthesia, GA in caesarean section involves induction with hypnotics, tracheal intubation facilitated by suxamethonium, and ventilation with nitrous oxide and oxygen mixture which includes a volatile agent and muscle relaxant.¹ On the contrary, RA in caesarean section such as spinal and epidural anaesthesia involve injecting of local anaesthetics into the spinal column to achieve preferred regions of local anaesthesia.² RA is generally preferred over GA due to certain risks and complications that GA carries in the obstetric population. These risks and complications include gastric aspiration and difficult intubation due to laryngeal oedema, enlarged breasts and reduced respiratory reserves.³

Search Strategy and Selection Criteria

We searched electronic databases including MEDLINE, EMBASE, PubMed and Google Scholar for studies evaluating the choice of anaesthesia amongst patients and anaesthesiologists. The search was performed using the

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following search terms: “conscious surgery”, “general anaesthesia”, “regional anaesthesia”, “preoperative anxiety”, “intraoperative awareness”, “public perception of anaesthesia” and “fears of anaesthesia”. Additionally, bibliography searching of all explored literature was performed to augment the citation searching.

Evolving Away from General Anaesthesia as the Sole Option

Current expert opinions favour RA based on their knowledge from dated evidence. Old meta-analyses showing that RA is safer than GA were based on data collected from the 1970s to 2000s.⁴ On the contrary, recent meta-analyses such as the Cochrane Review do not conclusively show that GA is more dangerous than RA.⁵ We do not deny that patients who underwent GA today have better recovery profile credited to improved monitoring, updated protocols and perioperative surgical homes. The differences in safety profiles between GA and RA may be similar when compared with healthy patients. However, these differences become significantly clearer when patients come with comorbidities. In such patients, RA is a safer alternative and should be explored. Therefore, we aim to explore the reasons why patients may choose GA over RA in the hope that we can better understand and provide patients with well informed choices.

In obstetrics, patients are encouraged to undergo RA rather than GA to avoid life-threatening complications such as difficult intubation and aspiration.⁶ RA in obstetric anaesthesia is the current preferred route of many physicians in their priorities to provide the best surgery outcome and patient care. However, for patients, sharing the same mentality and agreeing with the physicians’ priorities may not be that simple. This is because many patients would prefer to undertake the risks of GA, even when there are safer options available, just so that they could be rendered unconscious and oblivious to their fears during the surgery.

Preoperative Anxiety Influences Patient’s Selection of Anaesthesia

As with any decision-making, anxiety has always been a major psychological influence on people. This is especially evident in making decisions on one’s surgery including the choice of anaesthesia employed. Patients scheduled for surgery undergo a spectrum of anxiety levels depending on age, gender, previous anaesthesia experience, type of surgery performed, type of anaesthesia employed and preoperative information.⁷ Interestingly, risk factors that predispose patients to preoperative anxiety include female gender, level of education, history of cancer, psychiatric disorders, depression, history of smoking and pain.⁸

Regardless of the level of anxiety or the risk factors that

predispose patients to experience preoperative anxiety, it is undeniable that preoperative anxiety is widely accepted as an expected response to arguably any surgery. Whilst many studies have shown that preoperative anxiety has led to increased postoperative analgesia, prolonged hospital stay, perioperative adverse outcomes and poor patient satisfaction,⁹⁻¹² there have also been studies to suggest an association between preoperative anxiety and selection of anaesthesia type – particularly, preference towards GA. For example, in a cross-sectional study scheduled for elective caesarean surgery, preoperative anxiety was significantly higher in patients who underwent GA compared to RA.¹³

However, we also recognise factors that may influence patient’s selection of anaesthesia independent of preoperative anxiety. For example, a cross-sectional survey conducted by Ahmad and Afshan showed that younger women who are more tech-savvy are seemingly able to acquire medical information and become more knowledgeable in anaesthesia techniques, influencing their selection of anaesthesia, independent of preoperative anxiety.¹⁴ In addition, they also found that previous surgical experience enhanced women’s knowledge of anaesthesia options, influencing their selection of anaesthesia. Finally, their study also showed that patient demographics such as country of birth and cultural background play a role in patient selection of anaesthesia.¹⁴ Their study concluded that 48.3% opted GA as compared to 33.4% of RA in Pakistan, a developing country. This is contrasted to developed countries where the rate of RA exceeded 90% for elective caesarean section.¹⁴ Having said that, it is noteworthy that even developing countries are trending towards the use of RA in caesarean section.¹⁵

While we are moving away from paternalistic decision-making towards a more balanced, shared decision-making between physicians and patients in surgery options and medical therapies,^{16,17} there remains some evidence on the influence of physicians, specifically anaesthetists, on patients’ decision of their anaesthetic care. However, there is a significant influence that anaesthetists have on patients’ anaesthetic care preferences. For example, a study in Hong Kong found that anaesthetists influenced the decision of a higher proportion of patients who had RA (51.5%) compared with those who had GA (38.7%). Interestingly, obstetricians influenced the decision of a lower proportion of patients who had RA (40%) and a higher proportion of patients who had GA (46.7%).¹⁸ As such, anaesthetists play a strong role in educating and influencing patients’ preference of anaesthetic care. Similarly, obstetricians also exert some influence on patients’ preference and this can be further explored in future studies.

Nevertheless, preoperative anxiety remains a strong influence on patients’ preference of anaesthesia. While we establish that preoperative anxiety contributes greatly to

patients' selection of GA over a safer and doctor-preferred alternative like RA, it is important to explore the reasons behind patients' anxiety and fears that influence them to undergo GA instead.

Fear of Being Conscious during Surgery

Amongst the many reasons for electing GA over RA, being conscious intraoperatively has shown to be one of the most prominent factors eliciting patient anxiety. With patients already feeling distressed over undergoing surgery, being conscious and aware intraoperatively only serves to accentuate the anxiety.

Previous studies by Mitchell and available literature show that the majority of patients view their surgery with local or RA as anxiety provoking, with the thought of being conscious, ability to feel the surgeon, seeing their body open and the surgery being more painful due to local or RA and numbness wearing off too quickly as the most significant influences.¹⁹

Other researchers of the field have also revealed similar findings that increase patient anxiety. Gajraj et al uncovered from a study involving 100 obstetric patients who refused RA for elective surgical procedures, that the possibility of viewing events and hearing intraoperative conversation were influential in their decision to undergo GA despite having anaesthesiologists enthusiastically promote the benefits and safety of RA over GA.²⁰ Muneer et al also discovered similar results from a survey of patients scheduled for elective caesarean section who had refused RA due to fear of intraoperative awareness.²¹

In addition to the overwhelming response from patients, there have also been reports of similar concerns from the general public. Matthey et al conducted a province-wide telephone survey of 1216 participants in Canada showing that the majority were fearful of RA because they are concerned with "seeing the surgery". Moreover, the authors also expressed that this fear would have been greater reported had they included the ability to listen during surgery.²²

Therefore, the vast literature suggests the fear of intraoperative consciousness as a significant reason for patients' preference of GA over RA despite the higher risks associated with the former.

Possible Solutions for Exploration

To help patients and physicians reconcile their differences in priorities and opinions regarding the choice of obstetric anaesthesia, it is vital that education and communication be established between the parties. Many patients who experience a high degree of preoperative anxiety may impulsively select an option they deem to be the safest and most comforting. Unfortunately, the choice made by these

patients may not be the safest option in reality.

Previous studies have shown that anaesthetic provision information provides significant alleviation of anxiety.^{23,24} Lee et al carried out a systematic review that supports the use of video and printed information about the overall process of anaesthesia and its risks prior to surgery for reducing patient anxiety while improving patient knowledge.²⁴ To further provide effective management of patient anxiety, concerns relating to local or RA can be explored while common misconceptions can be discussed.

By investing in patient information, patients are less anxious and more inclined to undergo regional or local anaesthesia for their surgeries. Karaaslan et al conducted a survey for 150 obstetric patients who were scheduled for elective caesarean sections and revealed that 66% of them who had previously refused RA for reasons such as intraoperative awareness and fear of permanent nerve damage, later agreed to undertake it after proper education was provided by the anaesthesiologist.²⁵

Therefore, perioperative education is important in not only providing accurate and adequate information for maximal informed consent, but also in allaying the patients' fears and concerns of the surgery.

Conclusion

Patient autonomy, one of the 4 main pillars of medical ethics, is constantly upheld by medical professionals. It is the cornerstone of how we strive to do our best for patients, and is the motto we live by as medical professionals. However, when a patient advocates for a treatment option that is more dangerous than other available alternatives, the ethos of decision-making for the best of the patient becomes torn between upholding patient autonomy versus ensuring beneficence. We must ensure that such decisions made by patients are not made impulsively without adequate education and a conducive environment. Our paper has shown that GA is not the best option for obstetric patients, and that anaesthetic alternatives can be considered. More importantly, our paper has highlighted the many factors that influence patients' decision in selecting their mode of anaesthesia, specifically the overarching influence – preoperative anxiety – that remains prevalent. As such, there exists a difference in priorities between physicians and patients regarding the mode of anaesthesia.

Therefore, it is important to ensure that adequate time is given for preoperative consultations, both in proper education and anxiety relief for the patient. In doing so, such ethical dilemmas can potentially be resolved effectively. This may be difficult to carry out in today's time when patient load is heavy and there is arguably lesser time allocated for preoperative consultations so that more surgeries can

be performed in a shorter amount of time. Nevertheless, it remains important that we prioritise patient care above all and ensure that effective communication is achieved between patients and doctors, adequate time is given for proper procedure consent-taking and that information is available and transparent to our patients. While Medicine continues to evolve, such as in the case of GA moving away from being the only option available in obstetric anaesthesia, we too must continue to evolve our mindsets into one that is current and open to change. As time has shown us repeatedly, people embrace change differently. The struggle between patients and doctors in deciding what is best for patients exists even when it is not acknowledged. It is therefore our duty as practising physicians to combine the knowledge of the past and evidence of the present, and apply it to the individual patient.

Acknowledgements

The authors would like to thank their families, Duke-NUS Medical School and A/Prof T Thirumoorthy for their support and guidance in writing this paper.

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