

To compare and contrast the recovery profiles of various anesthetic techniques used in ambulatory anorectal surgery

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Abstract:

Aim: To compare and contrast the recovery profiles of various anesthetic techniques used in ambulatory anorectal surgery. **Material and methods:** The current research comprised 120 participants who were getting ready for anorectal surgery. All of the patients were divided at random into three research groups: Patients in Group A had ambulatory anorectal surgery while under spinal anesthesia, whereas those in Group B had it done under local anesthetic instead, and those in Group C had it done under general anesthesia. Patients with negative history of any known drug allergy, Patients with negative history of diabetes and hypertension and Patients with negative history of presence of any form of malignancy. **Results:** 120 patients in total were analyzed for the current research. In the current investigation, the average time spent under anesthesia was 75.19±4.55 minutes, 45.85±3.98 minutes, and 80.11±6.64 minutes, respectively, for participants in groups A, B, and C. Surgery took an average of 28.14± 3.25 minutes, 27.15± 3.74 minutes, and 27.87± 48 minutes on the patients in groups A, B, and C, respectively. The average length of time patients in groups A, B, and C spent in the hospital was 265.85±10.25 minutes, 135.85±12.22 minutes, and 260.58±10.59 minutes, respectively. **Conclusion:** It is possible to draw the conclusion that the use of local anesthetic is the procedure that yields the best results in terms of the recovery profile of patients who are having ambulatory anorectal procedures. However, more research is strongly encouraged.

Keywords: Anesthetic techniques, Ambulatory, Anorectal surgery,

Introduction

According to the findings of research that has been published in recent years, minor anorectal disorders are a pretty prevalent discovery in the society we live in today. Back in the 1920s and 1930s, anorectal surgery was widely considered to be a particularly agonizing procedure.^{1,2} The procedure itself only takes a brief amount of time, and when proper anesthetic is administered, it often does not result in any complications. Surgery on the anorectum needs a profound level of anesthesia since the region is reflexogenic and receives many nerve supplies.^{3,4} Surgical operations that may be conducted in an outpatient setting should be done in an environment that has sufficient people and equipment to provide a safe surgery, anesthesia, and recovery.⁵ This refers to both freestanding ambulatory surgical centers (also known as ASCs) and hospital-based outpatient surgery departments, both of which seem to perform just as well.⁶ As a result, the purpose of the current research

was to compare the postoperative recovery patterns of the various anesthetic procedures used for ambulatory anorectal surgery.

Material and methods

The current research, which was designed in the anesthesia department, compared and evaluated the recovery times for various anesthetic procedures used in ambulatory anorectal surgery. The current research comprised 120 participants who were getting ready for anorectal surgery. All of the patients were divided at random into three research groups: Patients in Group A had ambulatory anorectal surgery while under spinal anesthesia, whereas those in Group B had it done under local anesthetic instead, and those in Group C had it done under general anesthesia. Patients with negative history of any known drug allergy, Patients with negative history of diabetes and hypertension and Patients with negative history of presence of any form of malignancy. All the subjects were prepared for surgical procedure. All the procedures, according to

their respective groups, were done. The recovery profiles of each patient were recorded and compared on a master chart. SPSS software was used to analyze all of the findings. The degree of significance was evaluated using the chi-square test. P-values lower than 0.05 were considered significant.

Results

120 patients in total were analyzed for the current research. The patients in Groups A, B, and C had respective mean ages of 49.15 ± 3.69 , 47.35 ± 4.52 , and 48.31 ± 3.11 years. The participants in groups A, B, and C had respective mean weights of 78.89 ± 3.66 kg, 80.47 ± 5.58 kg, and 79.98 ± 6.69 kg. Group A had 29

Males, group B had 30, and group C had 31 males, respectively. In the current investigation, the average time spent under anesthesia was 75.19 ± 4.55 minutes, 45.85 ± 3.98 minutes, and 80.11 ± 6.64 minutes, respectively, for participants in groups A, B, and C. Surgery took an average of 28.14 ± 3.25 minutes, 27.15 ± 3.74 minutes, and 27.87 ± 48 minutes on the patients in groups A, B, and C, respectively. The average length of time patients in groups A, B, and C spent in the hospital was 265.85 ± 10.25 minutes, 135.85 ± 12.22 minutes, and 260.58 ± 10.59 minutes, respectively. When compared to the recovery profiles of general and spinal anaesthetic in the current research, local anesthesia's recovery profile was much quicker.

Table 1 Basic parameter of the participants

Parameter	Group A	Group B	Group C
Age	49.15 ± 3.69	47.35 ± 4.52	48.31 ± 3.11
Mean weight (Kg)	78.89 ± 3.66	80.47 ± 5.58	79.98 ± 6.69
Gender			
Males	29	30	31
Females	11	10	9

Table 2: Recovery profile among subjects of different groups

Parameter	Group A	Group B	Group C	P value Group A vs Group B	P value Group A vs Group C	P value Group B vs Group C
Duration of anesthesia (minutes)	75.19 ± 4.55	45.85 ± 3.98	80.11 ± 6.64	0.001	0.63	0.01
Duration of surgery (minutes)	28.14 ± 3.25	27.15 ± 3.74	27.87 ± 48	0.36	0.21	0.56
Duration of hospital stay (minute)	265.85 ± 10.25	135.85 ± 12.22	260.58 ± 10.59	0.001	0.44	0.001

Discussion

The term "ambulatory surgery" refers to surgical treatments that are less complicated than major operations requiring at least an overnight stay but more complicated than office-based procedures carried out under local anesthesia. The clinical anesthetic practice must evolve in response to the rapid expansion of ambulatory treatments. Views of surgeons and anesthesiologists have evolved as a result of economic and societal pressures. In the USA, several European nations, and Brazil, over 60% to 70% of all elective treatments are presently carried out in outpatient

settings. Due to the lengthy lower limb motor block caused by conventional spinal anesthetic, which may result in an unanticipated hospital stay, some operations may not be suitable for it.^{7,8} In the present study, analysis of a total of 90 patients was done. The patients in Groups A, B, and C had respective mean ages of 49.15 ± 3.69 , 47.35 ± 4.52 , and 48.31 ± 3.11 years. The participants in groups A, B, and C had respective mean weights of 78.89 ± 3.66 kg, 80.47 ± 5.58 kg, and 79.98 ± 6.69 kg. Group A had 29 Males, group B had 30, and group C had 31 males, respectively.

For inguinal herniorrhaphy in the ambulatory context, Song D et al evaluated the cost-effectiveness of an

ilioinguinal-hypogastric nerve block (IHNB) approach with standardized general and spinal anesthesia procedures. 81 willing outpatients were randomized to undergo spinal anesthesia, general anesthesia, or IHNB-monitored anesthesia treatment (MAC). Recovery periods, 24-hour surgical side effects, and related additional expenses were all assessed. Patients receiving IHNB-MAC had the quickest time to home readiness, the lowest pain score at discharge, and the best satisfaction at 24-hour follow-up when compared to patients receiving general and spinal anesthetic. The IHNB-MAC group also had the lowest overall anesthetic expenses. They came to the conclusion that, in terms of recovery time, patient comfort, and additional expenditures, IHNB-MAC is the most economical anesthetic approach for outpatients undergoing unilateral inguinal herniorrhaphy.⁹ In the current investigation, the average time spent under anesthesia was 75.19±4.55 minutes, 45.85±3.98 minutes, and 80.11±6.64 minutes, respectively, for participants in groups A, B, and C. Surgery took an average of 28.14± 3.25 minutes, 27.15± 3.74 minutes, and 27.87± 48 minutes on the patients in groups A, B, and C, respectively. The average length of time patients in groups A, B, and C spent in the hospital was 265.85±10.25 minutes, 135.85±12.22 minutes, and 260.58±10.59 minutes, respectively. When compared to the recovery profiles of general and spinal anaesthetic in the current research, local anesthesia's recovery profile was much quicker.

When used alone or in combination, propofol and sevoflurane for office-based anesthesia, respectively, were evaluated for their clinical effects, recovery characteristics, and cost-effectiveness by Tang J et al. One of three general anesthesia groups was randomly allocated to 154 outpatients receiving superficial surgical procedures at an office-based surgical clinic. Propofol 75-150 microg x kg(-1) x min(-1) or sevoflurane 1-2% (groups I and II) with N₂O 67% in oxygen were given after propofol 2 mg/kg for induction to maintain anesthesia. Sevoflurane was used together with N₂O 67% in oxygen to produce and maintain anesthesia in group m. Sevoflurane-N₂O was utilized for both the induction and maintenance of anesthesia, which resulted in considerably longer timeframes for standing up and being "home ready" despite early recovery characteristics (such as eye opening, reaction to instructions, and sitting up) being identical in all three groups. When propofol was used for both the induction and maintenance of anesthesia, the time to tolerate fluids, the length of time spent in the recovery area, and the duration until release were reduced dramatically. Similarly, after propofol

anesthesia, the frequency of postoperative nausea and vomiting and the need for rescue antiemetics were both dramatically decreased. Finally, using propofol for the induction and maintenance of office-based anaesthetic resulted in lower overall expenses and higher patient satisfaction. Propofol-N₂O usage for office-based anesthesia was linked to a better recovery profile, higher patient satisfaction, and reduced expenses when compared to sevoflurane-N₂O.¹⁰

Conclusion

It is possible to draw the conclusion that the use of local anesthetic is the procedure that yields the best results in terms of the recovery profile of patients who are having ambulatory anorectal procedures. However, more research is strongly encouraged.

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