

REVIEW OF LITERATURE ON THE EFFECTS OF IMMERSIVE VIRTUAL REALITY (IVR) IN SURGICAL PROCEDURES WITH REGIONAL ANESTHESIA

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Introduction

The provided literature comprises a collection of studies that investigate the impact of intra operative immersive virtual reality (IVR) on the patient's Heart rate during surgical procedures and post operative VAS score in procedures performed under regional anesthesia.

Materials and Methods

As this review is devoid of patient identifiable information, it is exempt from IRB review requirements as per Einstein-Jefferson policy.

As this review is devoid of patient identifiable information, it is exempt from obtaining patient consent.

PRISMA guidelines were followed in performing this study.

Research was conducted for clinical human studies.

Literature research was carried out in pertinent databases, including PUBMED and EMBASE.

Our inclusion and exclusion criteria were met by six studies.

Results

Effect on Heart Rate: We combined data from four different studies, involving a total of 414 participants, including 201 cases who received VR during the procedure and 213 control participants. The mean heart rate in the control group was 76, while it was 78.625 in the case group, which does not demonstrate a beneficial effect.

Effect on Pain Score: Data from three papers were aggregated, including a total of 73 cases who received VR during the procedure and 79 control participants. The mean postoperative VAS score was 3.8 in the VR group and 3.3 in the control group, which was a significant change.

Discussion

Concluding Remarks: The reviewed literature indicates that IVR has the potential to alleviate pain during surgical procedures performed under regional anesthesia. While the effects on heart rate control were not significant, the overall findings support the notion that IVR can be a valuable adjunct to reducing patient-experienced pain during procedures under regional anesthesia. Further research is needed to better understand the nuances of IVR's effects on pain, heart rate, and overall patient satisfaction in various surgical contexts.

References

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