

# **Ketamine versus fentanyl as an adjuvant to local anesthetics in the peribulbar block for vitreoretinal surgeries: Randomized controlled study**

ملخص البحث باللغة الانجليزية:

## **Background:**

The use of an adjuvant to local anesthetics in the peribulbar block may improve the block characteristics. This study aimed to evaluate the effect of the addition of either ketamine or fentanyl to local anesthetics in single injection peribulbar block on the quality of the block.

## **Methods**

The study included ninety adult patients presented for vitreoretinal surgeries. Patients were randomly allocated into three groups. All patients received peribulbar block with a local, 30 µg fentanyl, or 25 mg ketamine in Control group, Fentanyl group, and Ketamine group respectively. The measurements included the onset and duration of both anesthesia and akinesia with evaluation of intraocular pressure, postoperative pain score and need of analgesics. anesthetic mixture composed of 4 ml lidocaine 2% containing hyaluronidase, and 5 ml of plain bupivacaine 0.5% with an addition of either 1 ml of normal saline,

## **Results**

As compared to control group, the use of either fentanyl or ketamine as local anesthetic adjuvant significantly fastened the onset of anesthesia ( $1.67 \pm 1.21$  min) ( $1.93 \pm 1.36$  min), prolonged the duration of lid akinesia ( $127.50 \pm 22.20$  min) ( $127.00 \pm 22.19$  min), increased the duration of globe akinesia ( $156.00 \pm 28.02$  min) ( $158.00 \pm 31.18$  min), minimized the time required to start surgery ( $6.57 \pm 1.99$  min) ( $6.57 \pm 1.85$  min), and increased the time for first request of postoperative analgesia ( $189.50 \pm 34.92$  min) ( $184.67 \pm 35.37$  min) ( $P < .05$ ). However, neither fentanyl nor ketamine had a significant effect on the onset of lid or globe akinesia or the intraocular pressure ( $P > .05$ ).

## **Conclusion**

Fentanyl or ketamine can be used as a local anesthetic adjuvant in the peribulbar block in patients presented for vitreoretinal surgeries as both of them improved the quality of the block without increasing intraocular pressure.