

# Auricular acupuncture for controlled hypotension in FESS: A Case Series

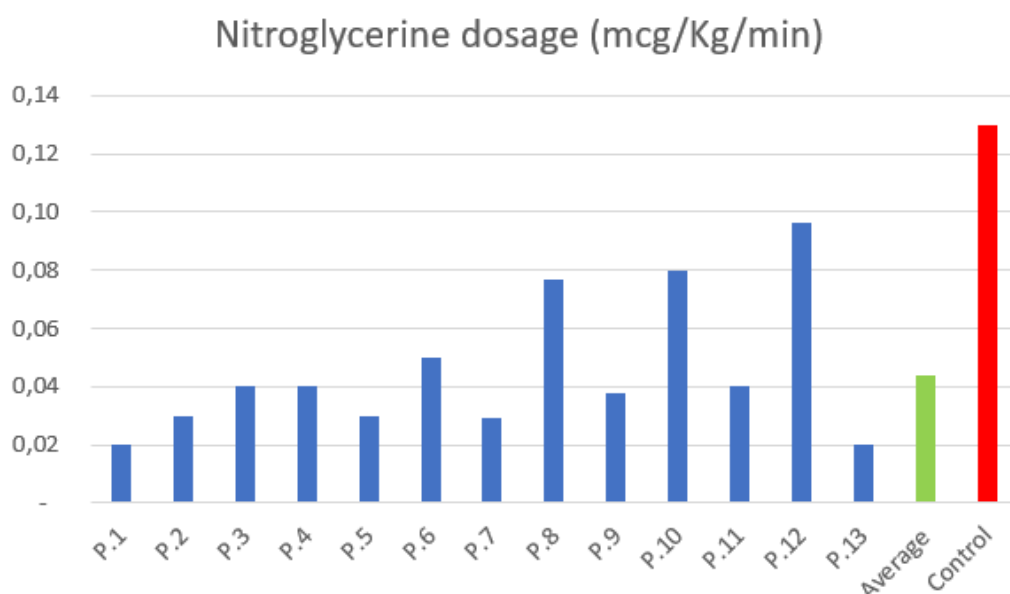
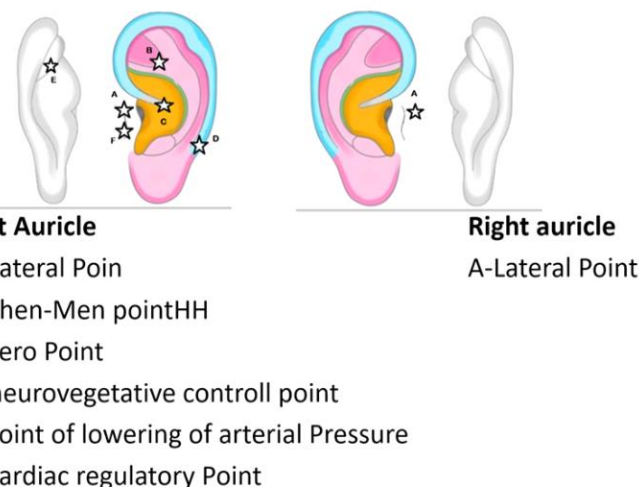
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## Background:

Surgical demands during endoscopic sinus surgery (FESS) require careful arterial pressure control; according to literature data, a MAP between 50 and 65 mmHg is considered adequate. Among the various pharmacological strategies proposed in literature, our center defined a protocol based on standardized use of continuous infusion of nitroglycerin. In order to reduce pharmacological side effects, we proposed the use of auriculotherapy hypotensive techniques through the application of atraumatic magnetic spheres on auricle during surgery. We present a prospective pilot series, with reference to interventions carried out in our center using similar pharmacological protocols. The primary outcome is the reduction in the total dose of nitroglycerin, normalized for time of surgery and patient's weight, necessary to maintain MAP values in controlled hypotension range.

## Methods:

We collected consecutive patients, aged between 18 and 69, scheduled for FESS under TIVA-TCI anesthesia. We standardized an infusion of propofol 4-6 mcg/ml TCI and remifentanyl 3-6 ng/ml, associated with auriculotherapy application (fig. 1). During surgery a nitroglycerine continuous infusion was titrated to reach a MAP < 70 mmHg.



## Results:

We enrolled 13 patients (Table 1) receiving a mean dosage of nitroglycerin of 0.044 mcg/kg/min. In all patients, controlled hypotension was achieved during surgery. No major adverse events were reported. Examination of our center's previous medical records, regarding patient without auriculotherapy application, but using the same TIVA-TCI protocol, revealed an average intraoperative nitroglycerin dosage of 0.13 mcg/kg/min. The supposed sparing of nitroglycerin used is therefore 66,2 %.

## Conclusions:

The use of hypotensive techniques based on auriculotherapy seems effective and safe to reduce the dosage of nitroglycerin necessary to maintain adequate intraoperative MAP for FESS. It is difficult to compare this results with current available literature due to different anesthesia protocol and different MAP targets. Further RCT will be able to provide more solid evidence.