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Case report

Combined local anesthesia and monitored anesthesia care for cochlear implantation



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ABSTRACT

Introduction: Cochlear implantation has become a routine procedure for patients with hearing loss. In some patients, general anesthesia might be contraindicated due to multiple co-morbidities. We describe a successful protocol for cochlear implantation under local anesthesia with light sedation.

Case report: An 81-year-old patient presented with profound sensorineural hearing loss. Her past medical history revealed ischemic coronaropathy, managed by stenting. After multidisciplinary evaluation and clear adapted information to the patient, surgery was performed under local anesthesia with light sedation and monitored anesthesia care. The procedure lasted 70 min, and was without incident and under good conditions for the surgeon. During the intervention, the patient was comfortable. No nausea or vomiting was noted. The postoperative period was smooth and uneventful.

Conclusion: We find local anesthesia with light sedation a good alternative to general anesthesia for patients where general anesthesia is contraindicated. An experienced surgical and anesthesiology team is essential to shorten the duration of the procedure.

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1. Introduction

In the past, cochlear implantation (CI) was not considered for elderly patients, as the benefit was thought to be significantly less than that generally obtained in younger adult patients. This was attributed to physiological deterioration of cognitive abilities in the elderly, which may have an impact on the capacities of speech perception with CI. Other concerns were the tolerance of general anesthesia, risk of postoperative complications and the difficulties in manipulation of the external components of the device [1].

However, in more recent literature, CI in the elderly resulted in speech perception abilities comparable to those of younger CI recipients as well as measurable improvements in depression and loneliness [2,3].

Age should not be a contraindication when considering a patient for CI, as authors found an improvement in postoperative quality of life in patients implanted after the age of 75 [4].

As general anesthesia (GA) is routine practice over the world for ear surgery, local anesthesia (LA) is often overlooked. However, LA along with intravenous sedation and analgesia delivered under the care of an anesthesiologist (monitored anesthesia care: MAC) has been the standard of care in our department for otosclerosis surgery with excellent results in cooperative adult patients [5,6].

In this article, we describe our protocol of combined LA with MAC to reduce the need for GA in CI surgery.

2. Case report

We present a case report of CI under LA with MAC in an 81-year-old woman who presented to our clinic with progressive bilateral sensorineural hearing loss (SNHL).

Her past medical history was marked by essential hypertension, dyslipidemia and stented coronary artery disease. Audiometric studies showed severe bilateral SNHL: 90 dB HL and 20% speech discrimination at 60 dB under best-aided conditions using monosyllabic words. Preoperative cardiology consultation revealed no evidence of cardiac ischemia.

As for all patients in our center, other pre-implant evaluations were performed, such as vestibular studies, CT scan of the mastoids, magnetic resonance imaging, and speech therapy and psychological assessments. No contraindication for CI was found.

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