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Case Report

Ultrasound-Guided Cervical Plexus Block for Thyroidectomy: About 05 Cases at Sominé Dolo Hospital in Mopti

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Abstract

Local or regional anesthesia has long been recognized as a useful anesthetic option for thyroidectomy. This block was relatively confidential before the arrival of ultrasound. In our study, they were a series of five patients operated for thyroidectomy under bibloc of the intermediate and superficial cervical plexus associated with skin infiltration of the incision site. Conversion to general anaesthesia was required to control bleeding plus sedation with 05 mg midazolam for discomfort, verbal contact was maintained with patients and surgery was uneventful in the other cases. Cervical plexus block is a technique that can be used for thyroidectomy.

Keywords: Thyroidectomy; Local Anesthesia; Cervical Plexus Block

Introduction

Local or regional anesthesia has long been recognized as a useful anesthetic option for thyroidectomy [1]. This block was relatively confidential before the arrival of ultrasound. In recent years, the ease of realization provided by ultrasound has made it possible to popularize this block by making it more reliable, more efficient and more effective in anesthesia, oral and postoperative analgesia [2]. Our goal was to meet the need of the patient with a phobia of general anesthesia and at the same time highlight the feasibility of ultrasound-guided thyroidectomy with a minimum of anesthetic product. This technique makes it possible to overcome the complications of general anesthesia.

Patients and Observations

For the performance of the surgery, we had recourse to the rules common to all thyroid surgery, after the installation of the patient in the classic position of cervicotomy, incision and skin detachment respecting symmetry. Exposure of the thyroid compartment, a good exposure of the thyroid compartment is the best guarantor of quality thyroid surgery. It does not impose the systematic section of the subhyoid muscles. The lateral reclinaison of these muscles using Farabeuf spacers allows the exposure and clearance of most goiters. Release of the lower pole, mobilizes the entire lateral lobe along its vertical axis and thus gives access to its posterior face. It is always preferable, when dissecting the lower pole of the thyroid, to identify the lower parathyroid which is conventionally located at the lower and lateral pole of the thyroid. Release of the posterior surface, This essential step of the intervention can be broken down into three stages: discovery of the inferior thyroid artery; recurrent nerve research; reclinaison of the parathyroid glands. Release of the upper pole: The upper vascular pedicle must be well individualized before; to be ligated as low as possible. We performed a subtotal lobectomy and thyroidectomy or loboisthmectomy as needed. Hemostasis by ligation of bleeding vessels and end with a washing of the thyroid compartment with saline. Closure on drain, plane by plane using separate points.

We report a series of 05 (five) patients successively aged 24, 27, 35, 36 and 47 years or an average age of 33.80 +/- 8.98 (27.36) with a weight in kilograms of : 128, 74, 68 , 42 and 38 kg or an average of 70 +/- 36.02 kg (42.74); only one patient had a history of poorly monitored high blood pressure associated with a body mass index (BMI) calculated at 51.3 (morbid obesity) and lasilix which was stopped 48 hours before surgery; The preoperative examination allowed the patient ASA (American Society of Anesthesiologists) IV, II , III, IV and II. The average hemoglobin level was 9.4 +/- 2.70 (7;11). Two patients received a preoperative transfusion, the mallapati score was rated A II in three patients; all patients were in euthyroidism after hormonal control at the preanesthetic consultation and all had a satisfactory hemostasis assessment.

Photo 1: 27-year-old patient with hyperthyroidism (Profile view).

Photo 2: X-ray click of the Patient 27 years old.

Results

After the patients were admitted to the surgical department the day before the procedure and the observation of the young preoperative, a pre-anesthetic visit was carried out on the patients' hair before their admissions to the operating room. Upon admission to the operating room the anesthesia technique was again explained to patients A bilateral block of the superficial and intermediate cervical plexus was performed with 0.6 ml/KgP of 0.25% levo-Bupivacaine L associated with local infiltration of the incision site with 10ml of xylocaine at 1%. The surgery was performed with the patients in the classic thyroidectomy position. The average duration of surgery was 106 +/- 19.17 minutes and extremes were 85- and 130-min. Conversion to general anaesthesia was necessary to control bleeding plus sedation with 05 mg midazolam for discomfort due to pressure during mobilization of the gland which was quite tolerable in another patient, in the other cases no sedation was necessary, verbal contact was maintained with the patients and surgery proceeded without incident. The volume of the thyroid mass had no influence on the choice of anesthetic technique. Two patients were intraoperatively transfused with a mean blood loss of 200 +/- 32.71 ml (190;210). The mean blood pressure (MPA) at the end of the intervention was on average 73.60 +/- 15.27 (66;71). Patients were allowed to take oral fluid within 01 hours of surgery with the exception of the one patient converted to anaesthesia to control hemostasis. No patients experienced postoperative nausea and vomiting.

Photo 3: Installation of the patient.

Photo 4: Realization of the BPSPB echoguide.

Photo 5: Infiltration of the incision area.

Photo 6: Exposing the thyroid gland.

Discussions and Conclusion

Thyroidectomy under local anesthesia is a technique described for many years but remains poorly documented. Our results show that the practice of bilateral cervical blocks with 0.6 ml/KGP of Levo-Bupivacaine combined local infiltration of the incision site with 10ml of 1% xylocaine is a technique that can be used for thyroidectomy. Our average age of 33.80 +/- 8.98 years (27.36) is close to that of previous studies including that of G. Andrieu., *et al*. [1] and Mariko [2] but remains lower than that of Dieudonné., *et al*. [3] and G. Badidi., *et al*. [4] these could be explained by their types of studies that are randomized pain center in one and comparative between BPCB and hypnosis in the other; but also by the small size of our sample. The average surgical duration in our study was 106 +/- 19.17 minutes and extremes of 85 and 130 min is compared to that of G. Andrieu., *et al*. [1] unlike the study by G. BADIDI., *et al*. [4] 40.2 minutes. In our study feeding was authorized in the first hours (01h) after surgery unlike in G. BADIDI., *et al*. [4] whose feeding was authorized within two hours (02h) after the intervention after the patients left the post-interventional monitoring room this discrepancy may be consecutive to the nature of the study G. BADIDI [4] which included patients operating under general anesthesia. Two of our patients were rated ASA II, the most frequent classification as well as in the studies of Mariko [2] and G. Andrieu., *et al*. [1]. No patients experienced postoperative nausea and vomiting in our case series while patients were at high risk

(35.6%) of postoperative nausea and vomiting after thyroid surgery in the [1] however CAI HD., *et al*. [5] and Sadar K., *et al*. [6] studies demonstrated that SCBP (bilateral superficial cervical plexus block) with 0.5% ropivacaine and 0.25% bupivacaine respectively significantly reduced its incidence in clinical trials which could explain their absence in our series regardless of series size.

Bottom Line

The ultrasound-guided cervical plexus block in addition to being simple, safe, effective and cheap for simple goiter thyroidectomy and has an excellent cost-performance ratio, the cervical plexus block for thyroid surgery is the standard of ambulatory neck surgery. It will have to be mastered by a growing number of anaesthetists especially in developing countries in addition this simplicity should not silence the risk of possible complication that can lead to general anesthesia as in any type of surgery.

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