Original Research Article

A study of general anesthesia versus cervical block for the surgery of thyroid at tertiary health care center

T G Poornaganesh[1*], P Vasuprakash[2], Nalini Muddana[3], U Seshaphani[4]

[1,2,3]Postgraduate, [4]HOD, Department of Anesthesiology, Santhiram Medical College and General Hospital Nandyal, Kurnool District Andhra Pradesh, INDIA.
Email: ganeshmostinflammable@gmail.com

Abstract

Background: Historically, Thyroid and parathyroid surgery was done initially under local anesthesia. Aims and **Objectives:** To study General anesthesia versus cervical block for the surgery of thyroid at tertiary health care center. **Methodology:** This was a cross-sectional study carried out at tertiary health care centre during the one year period i.e. January 2017 to January 2018. In the one year period there were 64 patients who need thyroid surgery with written and explained consent were enrolled for the study out of these 32 were given General anesthesia (Group G) and 32 were given Local anesthesia (Group L). The statistical comparison was done unpaired t-test, and calculated by SPSS 19 version software. **Result:** The average age in Group G was 38 ± 2.93 Yrs. and Group L was 37± 3.42 Yrs. was comparable with each other. The ratio of Male to Female was 1.9:1 and 2.2 : 1 was also comparable ($p>0.05, X2= 0.070, df=1$) The duration of Surgery (min) was significantly higher in Group G as compared to Group L - 132 ± 3.45 and 101 ± 2.45 ($p<0.05, t=7.82, df=62$); Post operative pain (VAS) was significantly higher i.e. 5.62 ± 3.52 and 3.45 ± 2.31 ($p<0.001, t=8.12, df=62$); Onset of postoperative pain (min) was significantly higher i.e. 241 ± 3.42 and 61 ± 4.12 ($p<0.01, t=9.23, df=62$) respectively in Group L as compared to Group G. **Conclusion:** It can be concluded from our study that except the duration of Surgery more in General anesthesia and Post operative pain , Onset of postoperative pain was more Local anesthesia other parameters were parameters were comparable in both the group.

Key Word: surgery of thyroid, Local anesthesia for thyroid surgery, Anesthesia in thyroid surgery.

[*]**Address for Correspondence:**
Dr. T G Poornaganesh, Postgraduate, Department of Anesthesiology, Santhiram Medical College and General Hospital Nandyal, Kurnool District Andhra Pradesh, INDIA.
Email: ganeshmostinflammable@gmail.com
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INTRODUCTION

Historically, Thyroid and parathyroid surgery was done initially under local anesthesia.[1,2] With the advent of safer general anesthetic techniques, the need for local anesthesia fell by the wayside. There were isolated reports of the use of local anesthesia for thyroid and parathyroid surgery until the 1990s, when favorable experience with larger groups of patients was described.[3-5] With the development of minimally invasive parathyroidectomy techniques, the use of local anesthesia combined with monitored anesthesia care (MAC) became more frequent, particularly when combined with outpatient surgery.[6,7] Local anesthesia for thyroid surgery can be accomplished either by a regional block of the cervical plexus (C2-C4) combined with an anterior field block[8] or by an anterior field block alone.[5] So we have seen comparison of General anesthesia versus cervical block for the surgery of thyroid at tertiary health care center.

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METHODOLOGY

This was a cross-sectional study carried out at tertiary health care centre during the one year period i.e. January 2017 to January 2018. In the one year period there were 64 patients who need thyroid surgery with written and explained consent were enrolled for the study out of these 32 were given General anesthesia (Group G) and 32 were given Local anesthesia (Group L). All details of the patients like age, sex, and post operative parameters like Duration of surgery (min) , Post operative pain was measure by mean Visual Analogue Scale score (VAS) , Onset of postoperative pain (min) etc. was noted for the internal comparison . The statistical comparison was done unpaired t-test, and calculated by SPSS 19 version software.

RESULT

Table 1: Distribution of the patients as per the age and sex

	Group G (n=32)	Group L (n=32)	p-value
Average age	38 ± 2.93	37 ± 3.42	p>0.05,t=1.23,df=62
Sex			
Male	11	10	p>0.05,X^2= 0.070,df=1
Female	21	22	

The average age in Group G was 38 ± 2.93 Yrs. and Group L was 37± 3.42 Yrs. was comparable with each other. The ratio of Male to Female was 1.9:1 and 2. 2: 1 was also comparable (p>0.05,X^2= 0.070,df=1)

Table 2: Distribution of the patients as per the various parameters

	Group G (n=32)	Group L (n=32)	p-value
Duration of surgery (min)	132 ± 3.45	101 ± 2.45	p<0.05,t=7.82,df=62
Post operative pain (VAS)	3.45 ± 2.31	5.62 ± 3.52	p<0.001,t=8.12,df=62
Onset of postoperative pain (min)	241 ± 3.42	61 ± 4.12	p<0.01,t=9.23,df=62

The duration of Surgery (min) was significantly higher in Group G as compared to Group L -132 ± 3.45 and 101 ± 2.45 (p<0.05,t=7.82,df=62);Post operative pain(VAS)was significantly higher i.e. 5.62±3.52 and 3.45±2.31 (p<0.001, t=8.12, df=62); Onset of postoperative pain (min) was significantly higher i.e. 241 ± 3.42 and 61 ± 4.12 (p<0.01,t=9.23,df=62) respectively in Group L as compared to Group G.

DISCUSSION

Providing safe and effective anaesthesia for thyroid surgery can sometimes become a problem for the anaesthetists. This becomes relevant especially in large goitres which compresses or deviates the trachea from its normal position. Endotracheal intubation is difficult in such cases and in large goitres can be hazardous[9,10]. It is possible to perform thyroidectomy under bilateral superficial or deep cervical plexus block and it is a useful alternative to general anaesthesia in particular circumstances [10-12]. Also the goitre might be associated with thyroid functional disorders. Patients with both hypo and hyperthyroidism are prone to cardiac rhythm disorders which might get aggravated under the influence of general anaesthetic agents [13-15]. Regional anaesthesia techniques are safer than general anaesthesia in high risk patients, where endotracheal intubation is difficult or cardiac arrhythmias are anticipated. For thyroid surgery, regional anaesthesia is not a conventionally described option. Cervical plexus block has been used for operations in the neck and shoulder, particularly on the thyroid gland. It may also be used as a modality of pain therapy in this region [14] In our study we have seen that The average age in Group G was 38 ± 2.93 Yrs. and Group L was 37± 3.42 Yrs. was comparable with each other. The ratio of Male to Female was 1.9:1 and 2.2 : 1 was also comparable (p>0.05,X^2= 0.070,df=1)The duration of Surgery (min) was significantly higher in Group G as compared to Group L-132 ± 3.45 and 101 ± 2.45 (p<0.05,t=7.82,df=62); Post operative pain (VAS) was significantly higher i.e. 5.62 ± 3.52 and 3.45 ± 2.31 (p<0.001,t=8.12,df=62); Onset of postoperative pain (min) was significantly higher i.e. 241 ± 3.42 and 61 ± 4.12(p<0.01,t=9.23,df=62) respectively in Group L as compared to Group G. This was similar to Maya Belitova [16] *et al* they found in the LA+MAC group, pain appears earlier and is more severe (56min; VAS 6, 5) than in GA patients (223 min; VAS 1, 5; p<0.001). Otherwise all other factors were comparable in both the group. (p>0.05)

CONCLUSION

It can be concluded from our study that except the duration of Surgery more in General anesthesia and Post operative pain, Onset of postoperative pain was more Local anesthesia other parameters were parameters were comparable in both the group.

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