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COMPARATIVE STUDY BETWEEN MODIFIED BLAIR INCISION AND MODIFIED FACELIFT INCISION FOR PAROTIDECTOMY

Dr. Jitendra Singh Yadav	(M.S.), Professor and Head, Department of E.N.T., Maharani Laxmi Bai Medical College, Jhansi, Uttar Pradesh.
Dr. Gyanendra Dhar Dwivedi*	Junior Resident, Department of E.N.T., Maharani Laxmi Bai Medical College, Jhansi, Uttar Pradesh. *Corresponding Author
Dr. Bomkar Bam	Junior Resident, Department of E.N.T., Maharani Laxmi Bai Medical College, Jhansi, Uttar Pradesh.

ABSTRACT **Background:** Modified Blair Incision (MBI) and Modified Facelift Incision (MFI) are amongst the most commonly used incisions for parotidectomy. MBI has an advantage of wider surgical exposure, whereas MFI provides better cosmesis, as the incision goes behind the auricle and into the hair line. This study was done to compare and evaluate the outcomes, surgical exposure and cosmetic impact of both the above-mentioned incisions i.e MBI and MFI after parotidectomy.

Aims: Surgical outcome including complications and cosmetic outcome was assessed using a questionnaire on follow up. These results were then compared for both the incisions.

Material and Methods: A retrospective observational study was done. Study included patients who had undergone Superficial Parotidectomy for various benign indications in between September 2018 and august 2020. A total of 28 patients were included in the study, out of which 16 were operated by MFI and 12 by MBI. Patients were routinely followed up for a period of 6 months.

Results: Tumour character including size, location and histopathological features were found to be similar in both the groups. Total operative time duration was comparable and neither of the group had a higher rate of complications.

Conclusion: Patients who had undergone Superficial Parotidectomy using MFI were found to have better cosmetic result without any increased rate of complications and with adequate surgical exposure when compared to MBI.

KEYWORDS : Modified Blair incision (MBI), Modified facelift incision (MFI), parotidectomy.

INTRODUCTION

About 80 % of salivary gland tumor are from parotid, which contributes 3% of all the tumor in head and neck region[1-2]. Resection of parotid had to be done if surgery is required for any inflammatory lesions, benign or malignant tumors. Gutierrez[3] introduced a guideline of incision for approaching the parotid gland, the surgical techniques for parotidectomy have been greatly advanced. Ideal incision line for resection of parotid gland should provide the wide field of operation and minimize the post operative scar on the face and neck. The incisions given for parotid resection are commonly of two types, the Modified Blair incision (MBI) and Modified facelift incision (MFI)

We have routinely done both MBI and MFI over 24 month of duration. The purpose of this study is to review of incision method for parotid resection by comparative analysis of the surgical out come and its complications, and the patient's aesthetic satisfaction.

MATERIAL AND METHOD

The Blair incision, a bayonet-type incision, was introduced by Blair in 1912 and modified by Bailey 1941.[4,5] as modified Blair's skin incision was made, beginning at the preauricular skin crease, extending vertically downward, curving under the ear lobe, and then curving downward at a natural skin crease along the sternocleidomastoid (SCM) muscle located in the neck. MBI has the advantage of providing an excellent surgical field of view as it is connected by a cervical skin incision starting from the front of the trabeculae and running parallel to the lower edge of the mandible(fig no1).

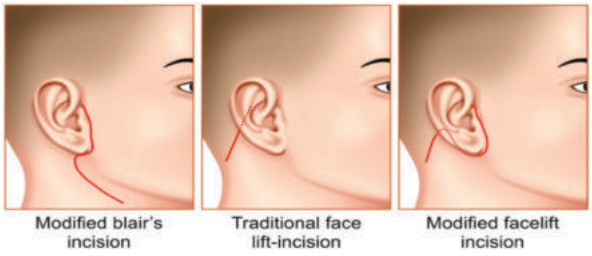

Fig 1 different type of incisions used in parotidectomies

Like MBI, Appiani in 1967[6] described about the Facelift incision in which the preauricular incision was extended retroauricularly in the occipital direction. It provided superior aesthetic outcome as compared to the Blair's incision, but offered limited surgical exposure, and hence was reserved for smaller sized tumours. Hagan and Anderson further modified Facelift incision that was advocated by Cohen and popularised by Terris et al.[7-9] MFI is also easy to navigate to preserve the posterior branch of the great auricular nerve.

The intra-auricular modification of facelift incision is different from the traditional incision which the preauricular incision was started from the posterior margin of tragus then through the intertragal notch to the crease between ear lobule and face. The incision then extends upward to the same level as the most superior part of external auditory canal and was parallel to the posterior auricular sulcus with distance about 2 mm to the auricle. Then, the incision was turned to the postauricular hairline and extended inferiorly with few mini-meters posterior to the hairline. The extent of inferior extension is depended on the size and location of the tumor [Figure 2]. In addition by this inscision temporal fascia can be concurrently performed by extending the sternocleidomastoid flap and the anterior auricle incision upward, it is more aesthetically pleasing than MBI It has been widely used in parotid resection as its superiority has been reported

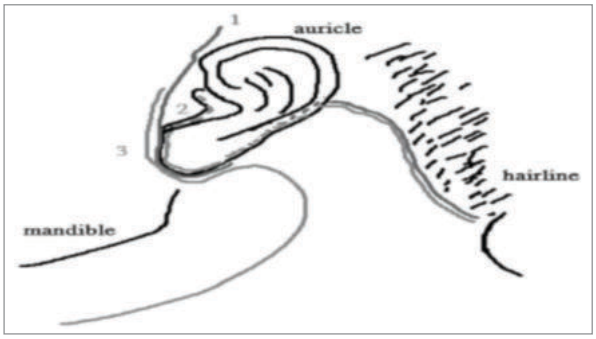

Fig 2. 1.MFI, 2. intra auricular modification of MFI, 3.MBI.

All the parotidectomies was performed by residents dept of otorhynolaryngology at mlb medical Jhansi Under supervision of faculty member from sept 2018 to august 2020. were divided into two, group A Modified blair incision and group B Modified face lift incisionon on the basis of their surgical approach. The patient having malignancy , parapharyngeal mass, arteriovenous malformation, diabetes, or any collagen vascular disease were excluded from the

analysis for fair comparision between groups.

Comparision was done on the basis of demographic charecteristics for age and sex, tumor for its size , location and pathological types. Other parameters assessed were duration of surgery, facial nerve integrity before and after surgery, any complication and cosmetic satisfaction.

Fig 3 ; pre op and post op after 15 days

RESULTS

After excluding all the known malignancies, revision surgeries, arteriovenous malformation, or parapharyngeal masses we found 28 parodectomies done for benign lesions between sept 2018 to august 2020. On further analysis 12 parotidectomies were approached by Modified blair incision, categorised as group A and other 16 by modified facelift incision as group B.

Table 1 shows average age , male ; female ratio , average size of tumor and whether it was superficial or deep. These all were comparable.

Table 1: Demographic and clinical characteristics of tumor in which incision method used

Sl. No.			Modified blair incision	Modified facelift incision
1	Sex of pt. M:F		2:10	3:13
2	Average Age of pt.		32yrs	35yrs
3	Average Tumor size (cm)		3.2	3.1
4	Tumor location	Superficial	11(91.7%)	14(87.5%)
		Deep	1(8.3%)	2(12.5%)

Table 2: Pathological characteristics of tumor according to incision method used

Sl. No.	Pathological types	Modified blair incision	Modified facelift incision
1	Pleomorphic adenoma	8	10
2	Warthin's tumor	3	3
3	Inflamatory lesion	1	2
4	Schawanoma	0	1

In table 2; shows the pathology was similar the two group where pleomormphic adenoma were most common followed by warthin tumor. In table 3and 4 surgical outcome was compared between two group all parameter were comparable except cosmetic satisfaction and facial palsy of which facial palsy was outcome of schwanoma pathology.

Table 3: surgical review after parotidectomy according to incision method used

Sl. no.	Surgical parameter		Modified blair incision	Modified facelift incision
1	Average Operation time(min)		118	129
2	Average Amount of drainage(cc)		72	78
3	Hematoma		0	0
4	Seroma		0	0
5	Facial nerve palsy	Transient	2	2
		Permanent	0	1

Table 4: Follow up after surgery by different type of incision used

Sl. no.	Follow up	Modified blair incision	Modified facelift incision
1	Frey syndrome	3 (25%)	3(19%)
2	Cosmetic satisfaction score (average)	5	9

DISCUSSION:

Facelift approach are contraindicated in surgeries of parotid malignancy as shown by many studies[10]. We excluded patient with known malignancy by clinically, radiologically, or with fine needle aspiration cytology, from both the group of study for fair comparision between MBI and MFI. Modified facelift incision has been advocated for small discrete lesion, located in the superficial lobe posteriorly or in the tail parotid[11].In our study with slight intra auricular modification and anterior extension in hair line we did parotidectomy of all size of tumor which were comparable with modified blair incision. Average size of tumor removed by MBI and MFI was 3.2 ±0.85cm and 3.1±0.89 cm respectively, which shows no significant difference. MFI is technically more challenging and requires good traction of the skin flaps for exposure and time consuming[10,12], but in our study we found statically no significant difference between two group as it was 118±45min and 129±38min in MBI and MFI respectively. Average amount of drainage was almost equal in both group and complication regarding wound healing like haematoma, seroma or infection were also not seen.

Functional cosmesis is very important goal when we do surgeries. Specially in head and neck region where facial asymmetry as result of facial nerve injury and scar mark in neck region is bothersome to the patient. Lee et al[13] have shown that there is significant correlation in between facial nerve palsy rates and tumor size independent of whether it is operated by MFI or MBI. In our study we find transient facial palsy of equal proportion in both type of group, while one case complicated as permanent facial palsy in MFI group but on analysis histologically it was outcome of schwanoma of facial nerve origin, having no significant. Which type of incision would be beneficial in preventing Frey's syndrome is controversial[14], but we have documented with almost of equal proportion i.e. 25% and 19% in MBI and MFI respectively. In the MFI approach scar marks, being obscured by wrinkles so provide cosmetically better outcome as compared to MBI[15]. In our study we follow the patient for 6 month and assessed through the same set questionaries in both the group and found that cosmetic satisfaction score was 9 in MFI as compare to 5 in MBI, which is definitely superior if we approach through MFI.

CONCLUSION:

In this we studied two group of patient, operated for parotid tumor,by two different incision MBI and MFI. On direct comparison we found that patients who had approached parotid mass using MFI with slight intra auricular modification were found to have better cosmetic result without any increased rate of complications and with adequate surgical exposure even for total parotidectomy when compared to MBI. It offers significantly improved cosmetic satisfaction score without any increased risk of complications like facial palsy, frey's syndrome, haemotoma.

REFERENCES

1. Cancer Research UK **Salivary gland cancer**(Aug 2017)https://www.cancerresearchuk.org/about cancer/salivary-gland-cancer/about(accessed October 2019)Google Scholar
2. H.H. Lin, K.H. Limesand, D.K. Ann **Current state of knowledge on salivary gland cancers** Crit Rev Oncog, 23 (2018), pp. 139-151
3. Gutierrez A. Tumores de la glandulaparotida. Su extripacion. *Rev Cirugia.* 1923;3:23–27.
4. Blair VP. Surgery and Diseases of the mouth and jaws. In: Blair VP, ed. Surgery. 3rd. St Lois, mo: Mosby, 1918: 492-523.
5. Bailey H. The tumors of the parotid gland with special reference to total parotidectomy. Br J Surg. 1941;28:337–346. doi: 10.1002/bjs.18002811102
6. Appiani A. Surgical management of parotid tumours. Rev Argent Cirugi, 1967;21:236.
7. Hagan WE, Anderson JR. Rhytidectomy techniques utilized for benign parotid surgery. Laryngoscope. 1980;90:711-715.
8. Cohen S. Personal experience with an alternate incision for parotidectomy. J Otolaryngol. 1988;17:7. Patsy DH, Thackray AC (1958) The treatment of parotid tumours in the light of a pathological study of parotidectomy material. Br J Surg 45(193):477–487
9. Terris DJ, Tuffo KM, Fee WE. Modified facelift incision for parotidectomy. J Laryngol Otol. 1994;108:574-578.
10. Lin TC, Chen PR, Wen YH, Chou YF. Intra-auricular modification of facelift incision with sternocleidomastoid flap—a cosmetic approach for parotidectomy: how we do it. ClinOtolaryngol. 2011;36:375-379.
11. Wasson J, Karim H, Yeo J, Panesar J. Cervicomastoidfacial versus modified facelift incision for parotid surgery: a patient feedback comparison. Ann Royal CollSurg Engl. 2010;92:40-43
12. To EW, Pang PC, Chu GM. The use of modified rhytidectomy for parotidectomy. Br J Plast Surg. 2000;53:80.
13. Lee SY, Koh YW, Kim BG, Hong HY, Jeong JH, Choi EC. The extended indication of parotidectomy using a modified facelift incision in benign lesions: retrospective analysis of a single institution. World J Surg. 2011;35:2228-2237
14. 26. Zhi K, Ren W, Gao L, et al. Face-lift incision combined with sternomastoid muscular flap in parotidectomy. Aesthetic Plast Surg. 2011;35:558-562
15. Rappaport I, Allison G. Superficial musculoaponeurotic system amelioration of parotidectomy defects. Ann Plast Surg. 1985;14:315-323.