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ORAL APPROACHES FOR BENIGN LESIONS- A NOVEL APPROACH

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ABSTRACT

Introduction -Cosmetically acceptable surgical results are the demand of this modern era. Aesthetic facial look has lots of impact on financial, social and personnel life.

Material and Methods- A total of twenty cases were studied in the Department of ENT at Hind Institute of Medical Sciences (HIMS), Barabanki, Uttar Pradesh. FNAC, USG and CECT were done and only benign lesions were selected which could be approached intraorally.

Results-There were 20 patients aged between fifteen years to sixty years. There were ten cases of submandibular swellings, four cases of sebaceous cyst, three cases of lipoma and two cases of parapharyngeal space swelling and one case of plunging ranula. The mean operation time of the IOA group was significantly longer than that of the TCA group, but decreased gradually with surgical experience. The mean hospital stay of the IOA group was significantly shorter than that of the TCA group.

Conclusions-The innovative surgical approaches were studied and meticulous, cosmetically acceptable results which were highly appreciated by the patients and their attendants were achieved. The stay in the hospital and complication rates were also quite low in intraoral approach than conventional external approach. Hence, intraoral approaches should be used for benign lesions which are amenable to surgery.

Keywords: Cosmesis, benign lesions, intraoral.

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INTRODUCTION

Aesthetics is the need of hour. People spend huge amount on their looks. In modern and advanced society facial looks counts a lot. Many jobs and avenues need people with pleasing look. So, the demand and expectations become very high from the doctors. A substantial number of patients reported dissatisfaction from outcome of head and neck surgeries.¹ A myriad of criteria can be the reason of this dissatisfaction. There are certain professions where facial look is of prime importance and if the pleasing facial appearance is lost, that may cost their livelihood. Cosmetic end result of head and neck surgeries is immensely valued by patients in recent world.

Cosmesis is literally defined as preservation, restoration, or enhancement of physical appearance, but medically it is concern in therapeutics for the appearance of the patient; an operation that improves appearance. Millions of surgical and minimally invasive cosmetic procedures of the face are performed each year, but factors which affect the surgical procedures and thereby results are expertise of operating surgeon, size of the lesion, procedure employed, and complication rate. We can improve the outcome by analyzing individual cases and deciding the optimum surgical protocol best suited in that given clinical situation. This will help us to

restore aesthetics surgically. Plastic surgeons make their livelihood from these patients who are concerned for cosmesis. Our approach has to be more meticulous and precise as head neck surgeons because we know the disease, pathogenesis and outcome. Our responsibility is enhanced because we have to remove the disease, and give cosmetic results which are at par with the plastic surgeons.

Hence, a surgical method should be devised which is satisfying, acceptable cosmetically and cost effective. So, we designed this study with the aim to achieve aesthetic looks by different oral approaches for removal of benign swellings on face and around oral cavity. This can help us to evade the scar on the face thereby helping the patient to smile again. While there may be subjective improvements in appearance, it is important to determine if these interventions have an impact on patients in other realms such as psychosocial functioning.²

MATERIAL AND METHODS

This prospective study was carried out at in the Department of ENT, Hind Institute of Medical Sciences, Lucknow, Uttar Pradesh from 1st February 2015 to 31st January 2016. Informed consent from the patients and permission from the ethical committee of the college was taken before the study. Our study design comprised of all benign lesions involving head & neck which were amenable for removal through intraoral approach. This study comprised of twenty benign swellings comprising of submandibular adenomas, lipomas, sebaceous cysts, swellings of parapharyngeal space etc. All were included in the study after confirmation by FNAC, USG and CECT scan if required. This helped us to know the extent, type of the disease and planning the treatment protocol. There were ten cases of submandibular swellings, four cases of sebaceous cyst, three cases of lipoma and two cases of parapharyngeal space swelling and one case of plunging ranula. The series of twenty patients who underwent transoral surgical excision were examined for age, indication for operation, complications, length of stay, and postoperative pathology. Relevant indications, risks, and benefits are also discussed in conjunction with relevant surgical anatomy and approach utilized. After the operation we had

made a protocol to start the ryles tube feeding and give mouth wash for at least three days so as to avoid infection and for good oral hygiene.

RESULTS

The patients comprised of eleven males (55%) and nine females (45%) within the age group ranging from fifteen years to sixty years. (Figure 1)

All the patients were otherwise healthy except for three who had hypertension and another two who had diabetes. They were only operated once these chronic diseases were controlled. All patients presented with the swelling over the face and neck, except three who presented with the intraoral swelling. (Table no 1). The intraoral approach (IOA) for submandibular gland lesion consisted of an incision on the floor of mouth from the caruncle of Wharton's duct to the retromolar trigone. The incision in gingivobuccal sulcus was given either above jaw or jaw below depending upon the location of the lesion. Dissection was carried out and the lesion was reached and removed. Similarly for parapharyngeal mass lesion the approach was designed. Any lesion more than five centimeters was not included in the study. A higher proportion (50%) of patients were diagnosed with submandibular adenoma followed by sebaceous cyst (20%). (Figure 2)

The mean operation time of the IOA group was significantly longer than that of the TCA group, but decreased gradually with surgical experience. The mean hospital stay of the IOA group was significantly shorter than that of the TCA group. One patient had wound infection, and in one more patient we had to switch over to the traditional cervical approach for large submandibular gland pleomorphic adenoma as dissection was not possible because of the adhesion and risk for lingual and hypoglossal nerve injury was to be avoided.

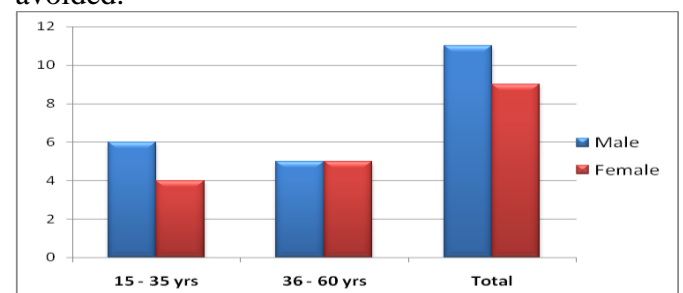


Figure 1: Age and gender wise distribution of patients

Table 1: Details of patients

Serial No	Age	Sex	Complains	Diagnosis	Treatment
1	43yrs	Male	Pain while swallowing	Submandibular adenoma	Excision
2	34yrs	Female	Pain while swallowing	Submandibular adenoma	Excision
3	60yrs	Female	Pain while swallowing	Submandibular adenoma	Excision
4	39yrs	Female	Pain while swallowing	Submandibular adenoma	Excision
5	44yrs	Male	Pain while swallowing	Submandibular adenoma	Excision
6	39yrs	Female	Pain while swallowing	Submandibular adenoma	Excision
7	34yrs	Male	Pain while swallowing	Submandibular adenoma	Excision
8	45yrs	Male	Pain while swallowing	Submandibular adenoma	Excision
9	34yrs	Male	Pain while swallowing	Submandibular adenoma	Excision
10	55yrs	Male	Pain while swallowing	Submandibular adenoma	Excision
11	32yrs	Male	Swelling over face	Sebaceous Cyst	Excision
12	40yrs	Female	Swelling over face	Sebaceous Cyst	Excision
13	37yrs	Female	Swelling over face	Sebaceous Cyst	Excision
14	15yrs	Female	Swelling over face	Sebaceous Cyst	Excision
15	23yrs	Female	Swelling over face	Lipoma	Excision
16	30yrs	Male	Swelling over face	Lipoma	Excision
17	28yrs	Male	Swelling over face	Lipoma	Excision
18	35yrs	Male	Difficulty in swallowing	Parapharyngeal adenoma	Excision
19	25yrs	Female	Inability to swallow	Plunging Ranula	Excision
20	40yrs	Male	Difficulty in swallowing	Parapharyngeal adenoma	Excision



Figure 4: Excised sebaceous cyst

DISCUSSION

There few questions which strikes every surgeon the moment he encounters lesion over the face. Cosmesis -what factors affect it? How we can enhance outcome? And what is best approach suited in that given situation. Many a times the situation is very puzzling. There are a number of professions where the facial looks are of prime importance even to get the job. Professions like air hostess, helpdesk, reception, front offices, personnel secretaries, news readers, models, actors, actresses, nurses need to have pleasing look. Cosmetic surgeries turnover is running into handsome amount. Moreover, marriages, relations etc depend a lot on the facial and physical looks of the partners. Science over years have evolved and developed, so has the medical sciences, different methods have been devised to decrease morbidity and increase the acceptability. Hence, intraoral route and endoscopic approaches have been devised. Kauffman et al³ study comprised of six of nine patients who presented with chronic sialadenitis, three of nine having obstructing sialoliths. Three patients presented with other benign cystic lesions consistent with a ranula, an infected mucocele, and a cystic teratoma. Chen et al⁴ too had included in his study design twenty eight patients. Our study also comprised of twenty patients and all were operated upon by intraoral route except for one in which we had to switch over to the transcervical approach (TCA) as it was large submandibular pleomorphic adenoma. Chang et al⁵ also studied to evaluate the benefits of the intraoral approach for removal of the submandibular gland (SMG) by comparing it with the usual method of the transcervical approach.

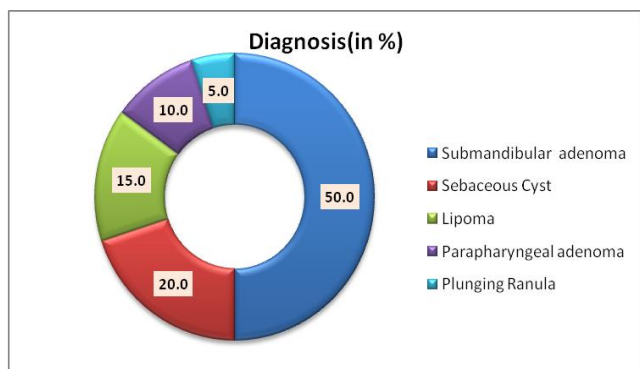


Figure 2: Distribution of patients according to diagnosis

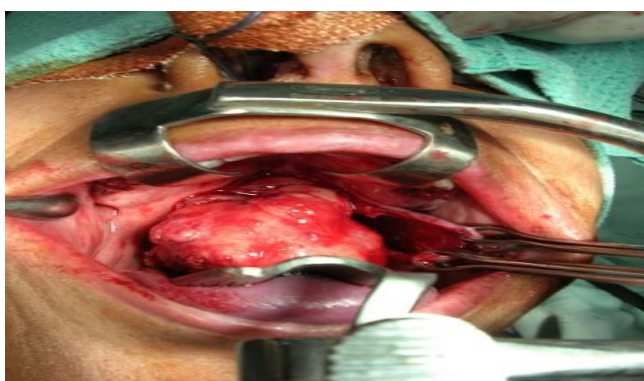


Figure 3: A peroperative view of parapharyngeal excised pleomorphic adenoma

Sixteen patients were included in the study, half were operated intraorally and other half by traditional external approach. David et al ⁶ also studied surgical excision of the submandibular gland (SMG). It is commonly indicated in patients with benign neoplasms, and non-neoplastic conditions such as chronic sialadenitis, sialolithiasis, ranula and drooling. In our study we considered only benign cases and diagnosis was confirmed before the treatment protocol was selected. Traditional SMG surgery involves a direct transcervical approach. In the recent past, alternative approaches to SMG excision have been described in effort to offer minimally invasive options or better cosmetic results. Kauffman et al ³ also compared transoral excision of the submandibular gland as a viable and safe approach to be utilized. There was no external scars caused, there is minimal risk to the marginal mandibular branch of the facial nerve, and skin incisions are avoided. Although the surgical anatomy is somewhat novel, the transoral approach has been used effectively and without complication in removing benign submandibular gland pathology in their series. Chen et al ⁴ tried to assess the feasibility, the risks and the advantages of endoscope assisted submandibular gland resection using a retroauricular hairline incision (RAHI) by comparing it with the conventional submandibular gland resection. Twenty eight patients with benign lesions of the submandibular gland were included in the prospective clinically controlled study. Thirteen patients had endoscope-assisted resection using the RAHI approach and fifteen cases had conventional transcervical approach resection. The two groups were compared for incision length, operation time, bleeding, incision cosmetic result, and complications. After three months the mean subjective satisfaction score for the incision scar in the endoscopic group was significantly higher than that in the transcervical group. La'porte et al ^{7,8} evaluated oral cavity growth by ultrasound, CT or MRI before surgery because many important structures like nerves, ducts, muscles, vessels and complex pathophysiology are present. The pathologic diagnoses of all cases were identified as benign diseases using fine needle aspiration cytology. In our study group of twenty, all patients underwent routine and required

specialized investigations like FNAC, USG and CECT. Singhal et al ⁹ stressed that FNAC had more than 90% with no significant complications. It can be concluded that FNA is a simple and rapid diagnostic test that can be useful for preliminary assessment of oral and oropharyngeal lesions. There are lots structures present in the oral cavity and hence differential diagnosis should be kept in mind. Lipoma, ranula, thyroglossal duct cyst, cystic hygroma, branchial cleft cysts, and benign and malignant tumors of the floor of the mouth and adjacent salivary glands are usually diagnosed.¹⁰ In our study we had one patient who had wound infection, and in one more patient we had to switch over to the traditional cervical approach for large submandibular gland pleomorphic adenoma as dissection was not possible because of the adhesion and risk for lingual and hypoglossal nerve injury was to be avoided. nChang et al ⁵ detected that patients (88 %) of the IOA group experienced sensory defects of the lingual nerve, but these symptoms were temporary. No lasting complications were noted in the IOA group; however, one patient of the TCA group had permanent paralysis of the marginal mandibular branch of the facial nerve. The incision scars were invisible owing to the location on the mouth floor in the IOA group, whereas they were apparent even on the natural skin crease of the neck in the TCA group. In conclusion, the SMG can be removed safely and effectively by IOA with the avoidance of an external scar and of injury to the marginal mandibular nerve. We suggest that the IOA be substituted for the TCA as the primary procedure for removal of the SMG in suitably selected patients. Removal of lipoma is relatively easy even if size is big as majority develops in cheek. Kauffman et al ³ operated nine patients who underwent attempted transoral submandibular gland excision, eight operations were completed transorally. Only one operation was converted to a standard external approach due to severe scarring. There was only one patient with a complication of incision breakdown and delayed healing in an irradiated field. There were no long-term complications involving the lingual or hypoglossal nerves, and there were no hemostatic complications. Chen et al ⁴ in their study had (i.e. endoscopic group) in two cases (15.4%) with temporary numbness of the earlobe

and 1 case (7.7%) with a temporary marginal mandibular nerve paralysis was found postoperatively. However, they recovered within one month. All twenty eight patients were disease free with a follow-up of ten to twenty four months (median of 18 months). Chen et al⁴ endoscope assisted submandibular gland resection via RAHI is a feasible and safe for the treatment of benign submandibular gland lesions. In comparison with the transcervical approach, this method can provide better cosmetic results without significant complications. Seung-Kee Shim et al¹² emphasized that intraoral approach was suitable for patients with small or medium size tumours but for large tumours alternative approach needs to be planned. While the traditional submandibular gland excision remains a direct transcervical approach, many other methods of excision are described that include open, endoscopic, and robot assisted resections. The approaches vary from being endoscopic, transcervical, submental, transoral or retroauricular. Many studies were conducted to compare transcervical approach (TCA) and the intraoral approach (IOA). The operation time, hospital stay, complications, and cosmetic appearance were compared between groups. The mean operation time of the IOA group was significantly longer than that of the TCA group, but decreased gradually with surgical experience. The mean hospital stay of the IOA group was significantly shorter than that of the TCA group. Alternative approaches to the SMG are feasible but should be tailored to the individual patient based on factors such as pathology, patient preferences, availability of technology, and the experience and skill of the surgeon.

CONCLUSION

Oral approach is quite simple, more acceptable cosmetically, with lesser hospital stay but only for benign lesions amenable for excision.

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