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RESEARCH ARTICLE

LIP CANCER: THE DIFFERENT MEANS OF RECONSTRUCTION (REVIEW OF 8 CASES)

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Abstract

Lip cancer is a frequent tumor of the head and neck region. Surgery is the treatment of choice for most of these cancers. Although there are several strategies to reconstruct lip tumors after tumor ablation this reconstruction is a challenge for the plastic surgeon. A retrospective review of the patients treated for lip cancer in the plastic reconstructive and esthetic Surgery Department of University Hospital Mohammed VI , from march 2021 to June 2023. Only patients withhistological confirmation of lip cancer were included. All the cases were evaluated for demographic features, tumor characteristics, and lip reconstructive surgery used. There were 5 male and 3 female patients. (5/3 ratio). with an average age of 57 years. the lower lip was the most frequently affected (63%), Most tumors were squamous cell carcinomas in 6 cases (75 %) a basal cell carcinoma (BCC) in 2 case (25%), and were located in the lower lip in 5 cases (63 %). Different surgical techniques were used for lip reconstruction after tumor ablation: a V-shaped wedge excision and direct repair was performed in 2 (25 %) patients W-shaped wedge excision in 1 patient (13%) (figure 5) The Karapandzic flap was performed in 5 cases (62) (4 patients karapandzicbilatéral and 1 case unilateral The most significant aspect of lip cancer surgery is tumor ablation, and that is not affected by the subsequent reconstructive strategy. Careful preoperative assessment and planning will allow the surgeon to reach an acceptable balance between form and function with the reconstruction.

Introduction:-

Cancers of the lower lip are common, with squamous cell carcinoma accounting for 90%.

This pathology often poses a problem of late diagnosis, and consequently of difficult therapeutic management. The aim of our study is to determine the epidemiological, clinical, therapeutic and evolutionary particularities of these cancers in comparison with the the literature data, in order to improve patient management.

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Methodology and Procedures:-

We conducted a retrospective review of the patient treated for lip cancer the plastic reconstructive and aestheticSurgery Department of University Hospital Mohammed VI CHU TTA from march 2021 to June 2023.

Only patients with histological confirmation of lip cancer were included. We obtained a sample of 8 patients. For each case, the following features were recorded: age, sex, size and location of the tumour , node, metastasis (TNM) status at presentation, histological diagnosis and microscopical characteristics of the tumour, with of excision margin, type of reconstruction performed, and postoperative treatment, Analysis of the data was performed using Microsoft excel

Results:

A total of 8 patients with lip cancer were included in the study.

There were 5 male (62%) and 3 female (38%) patients. Sex ratio was 5/3. Patient age ranged from 40 years to 70 years with an average value of 57 years.

All patients have significant sun exposure antecedent 2 patients were diabetic 4 patients are chronic smokers and only one patient is followed for high blood pressure

Regarding location of the tumour, the lower lip was the most frequently affected (5; 63 %), followed by the lower lip and upper lip and commissure (3; 37 %). When the patients first came in consultation, the largest diameter of the tumour was on average 3,4 cm, varying from 2 cm to 5 cm.

The distribution of postsurgical TNM shows that the most tumours were either stage II (33%) or stage III (50%), stage I is being represented in only 17 % of the patients. Histologically, the tumour was a squamous cell carcinoma (SCC) in 75% of cases (6), a basal cell carcinoma (BCC) in 25% (2). SCC was exclusively found in the lower lip in all patients.

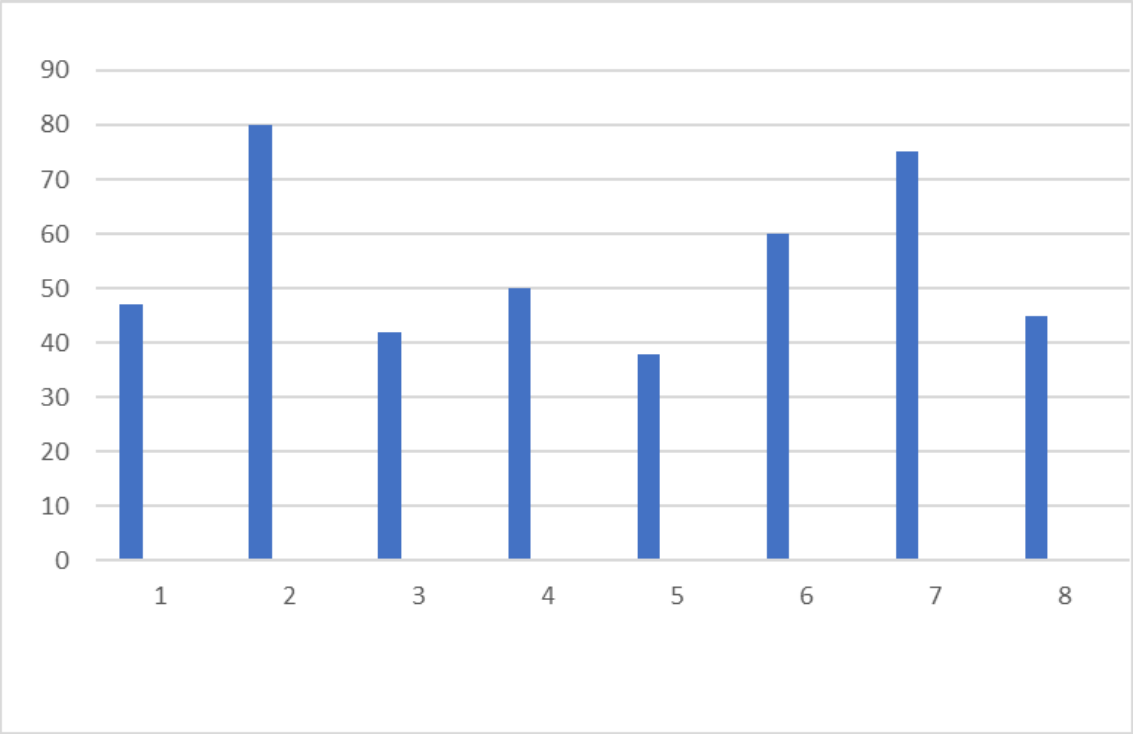

Figure 1:- Distribution of patients according to the age.

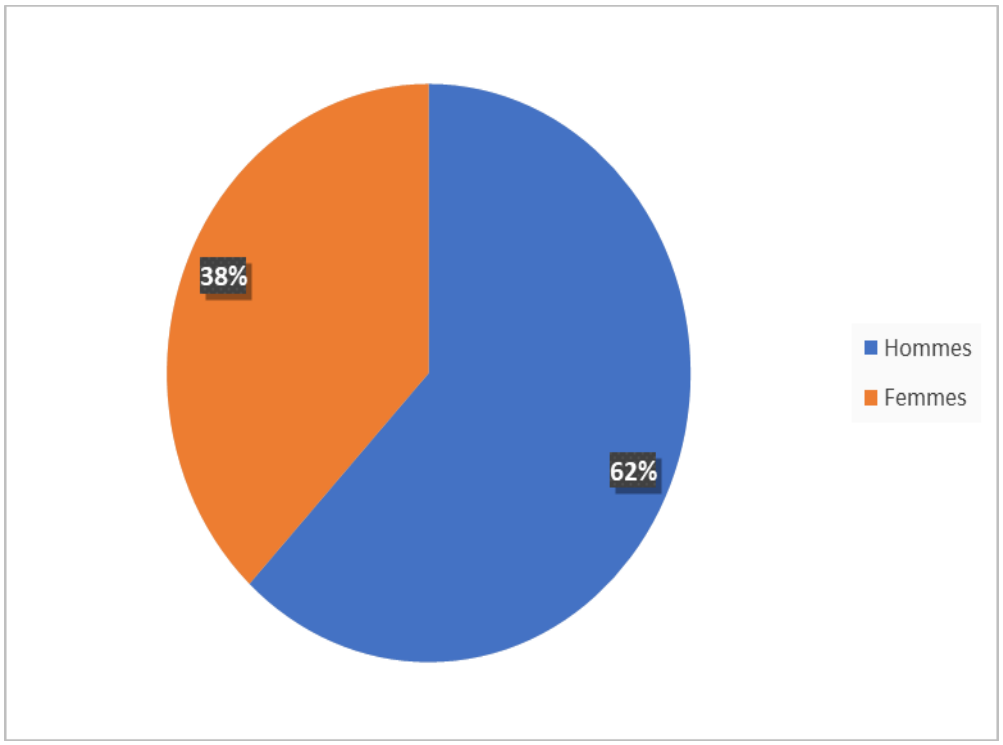

Figure 2:- Distribution of patients according to the sexe.

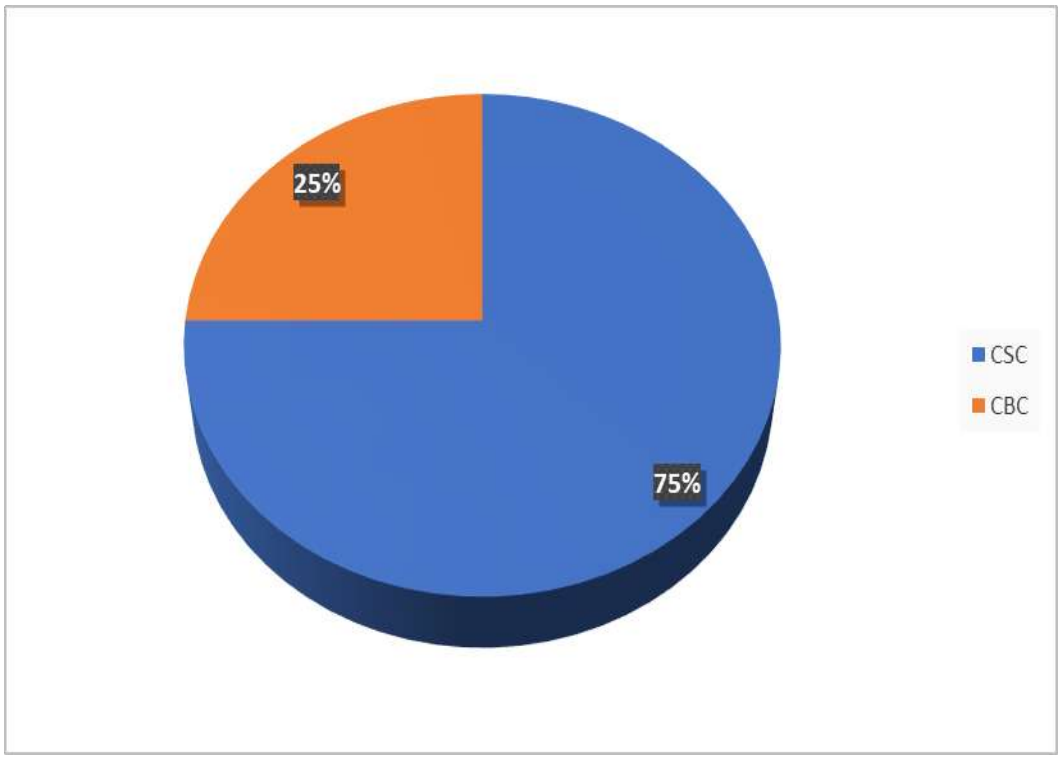

Figure 3:- Distribution of patients according to the type of lip cancer.

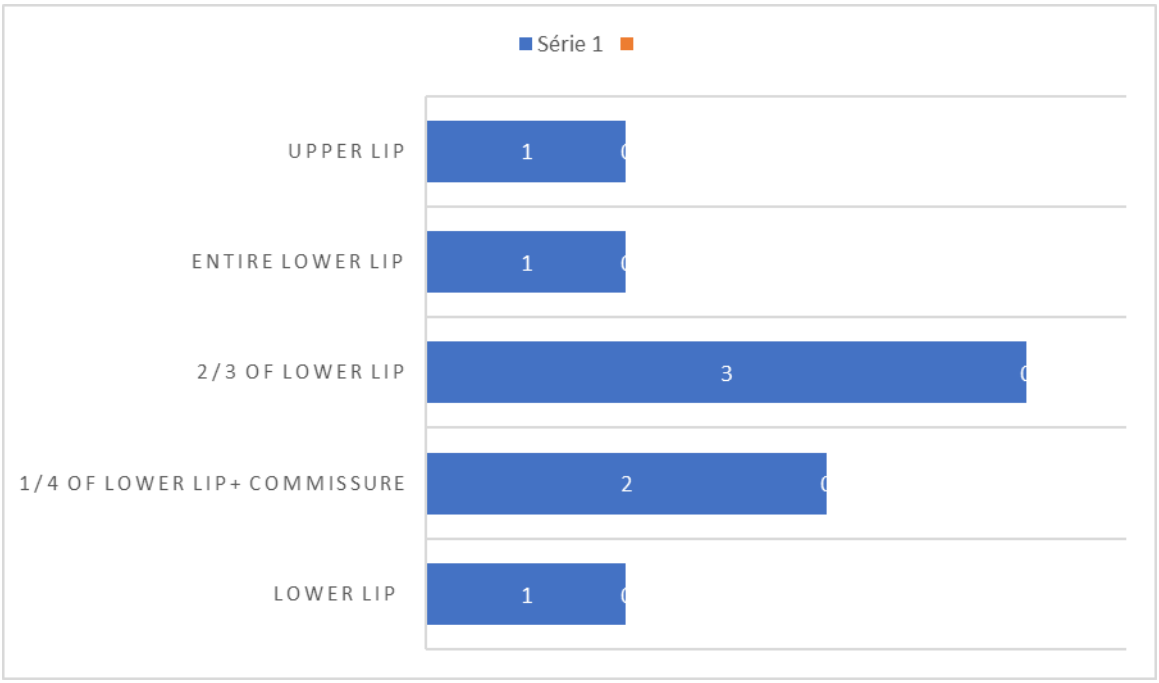

Figure 4:- Distribution of patients according to the location of the lip cancer.

Different surgical techniques were used for lip reconstruction after tumor ablation: a V-shaped wedge excision and direct repair was performed in 2 (25 %) patients W-shaped wedge excision in 1 patient (13%) (figure 5)
The Karapandzic flap was performed in 5 cases (62) (4 patients karapandzicbilatéral (figure 6) and 1 case unilatéral (figure7))

Figure 5:- V sharped wedge excision of the upper lip associated with W shaped wedge excision of a SBC of the lower lip and direct repair (plastic reconstructive and esthetic surgery department CHU TTA).

Figure 6:- Excision of a lower lip cancer and reconstruction with the karapindzic flip (plastic reconstructive and esthetic surgery department CHU TTA).

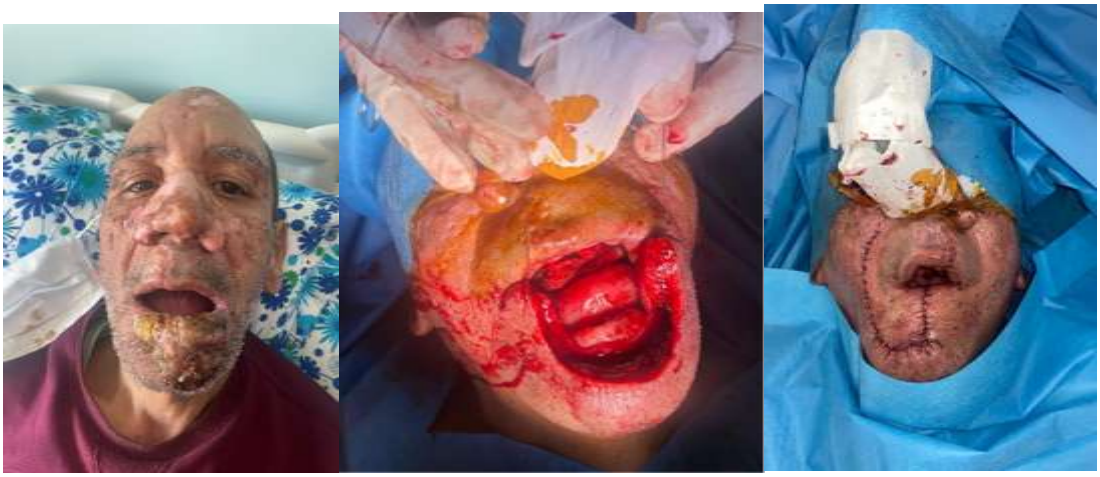

Figure 7:- Excision of a lower lip cancer and reconstruction with the karapindzicflip unilateral (plastic reconstructive and esthetic surgery department CHU TTA).

Discussion:-

Anatomy:

The lips are mobile muco-musculo-cutaneous tritissular folds that close the oral orifice at the front, forming its vestibule. Located on the lower level of the face, they define the labial cleft lip, occluded at rest.

The less fleshy upper lip is slightly longer than the the lower lip and overhangs it at the front. This is explained is explained by their relationship to the dental articulation and alveolar bone which support and project them.

The labial region is bordered by furrows, areas of surgical incisions incisions: nasolabial fold at the top, nasolabial folds laterally which extend the nasolabial folds downwards, and the labiomental fold below.

A distinction is made between the white lip, the red lip and the commissural region [1].

The white lip is made up of thick skin that is tightly adherent to the underlying muscle. to the underlying muscle, and the site of numerous follicles. The upper lip features a central depression, the philtrum, bordered laterally by the philtral ridges.

The red lip is formed by a "moist", mucous inner portion and a dry or semi-mucous outer portion. semi-mucous. The mucosa extends to the bottom of the buccal vestibules to reflect on the outer surface of the maxillae, where it forms

a fibrous mucosa: the gingiva. There are three distinct portions of this mucosa. The labial mucosa, which is supple, elastic and easily mobilized easily mobilized during endobuccal surgery. The vestibular which is rigid and adherent to the maxillae. It thickens from the dental apices to become the gingiva.

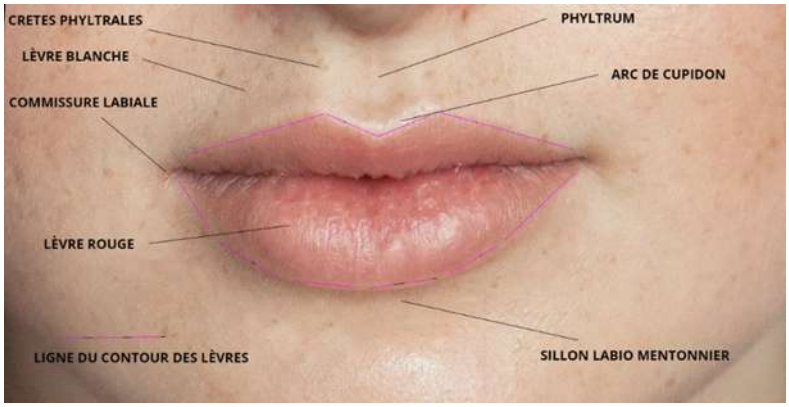

Figure 8:- Anatomic landmarks of the lip.

The dry or "vermilion" portion is separated from the white lip by a sharp, prominent mucocutaneous junction line. This line is curved at the median part of the upper lip of the upper lip along the "Cupid's bow", which responds to the philtrum. under which there is often a median tubercle on the free edge.

This arch and tubercle are associated with a slight reverse curvature and a slight depression of the lower lip. The continuity of the cutaneous-mucosal junction is a fundamental must be respected and restored surgically. [2].

Anatomopathology:-

In over 90% of cases [3], lip cancers originate in the squamous mucosa. squamous mucosa; most are carcinomas, usually well-differentiated and keratinizing. Other histological types have been described, but their frequency remains very low,such as cystic adenoid carcinomas (cylindromas) developed from submucosal salivarysarcomas or melanomas. Squamous cell carcinoma of the lips most often presents as a chronic, crustya chronic, crusty erosion, or as an irregular-edged, infiltrating ulceration, of slow evolution. The appearance of a vegetating or budding tumor is rarer. An important is the induration of the lesion, which is perceptible in the periphery, more or less extensive in depth, always extending well beyond the visible limits of the lesion. As it progresses, the tumor takes on an ulcero-vegetative form

Basal cell epitheliomas [4,5]

Basal cell epitheliomas develop electively on the cutaneous side of the upper lip. ten times less frequent than those of the lower lip.

Macroscopy: The macroscopic appearance of basal cell carcinoma is a pearly lesion, a rounded, translucent, telangiectatic papule that spreads progressively over the skin.

Other epithelial malignancies [6,7 ,8]

All malignant tumors developed at the expense of skin appendages are found in the lips

found in the lips:

- adenocarcinomas of the adnexa;
- Merkel's tumor, a neuroendocrine tumor with a dreadful prognosis,

both locally and in terms of lymph nodes and general metastasis;

- Epitheliomas arising from the accessory salivary glands.

Extension :

1. Local

Lymph node metastases are seen only in cases of EC, and are usually delayed. The frequency of primary lymphatic metastases varies from 2 to 10% at the first consultation first consultation [11]. They are submental, submandibular and, in advanced cases in advanced cases, preauricular and jugulocarotid.

Very well-differentiated carcinomas metastasize in less than 10% of cases, whereas poorly differentiated carcinomas metastasize in almost 1 in 2 cases.
Superior labial carcinomas grow faster and metastasize more rapidly than than lower labial carcinomas, probably because the upper labial lymphatic drainage is richer.

2. Distant metastases

Distant metastases are rarely described in lip carcinomas
[9 ,10,11]. In our series, only one patient had a distant metastasis.

4. Risk factors

Poor oral and dental condition, alcohol and tobacco intoxication, and prolonged exposure to ultraviolet sunlight in certain occupations (e.g. farming) were found in most of our patients, which is in line with the literature.
Therapeutic means :

Surgery

Surgery is used either as a first-line treatment, or as a salvage procedure if radiotherapy fails.

Removal of the tumor takes into account its specific factors: location, size and extension. location, size and extension. The resulting loss of substance requires immediately. To achieve this, the surgeon has several options at his disposal. to achieve the desired goal [12].

The type of anesthesia used depends, on the one hand, on the method chosen and, on the other hand, the patient's state of health. Tumors between 1 and 3 cm in size can be treated under local anesthesia [13].

Excision margins :

he problem of resection margins is a delicate one, since the aim is to avoid unnecessary sacrifice of healthy skin. carcinological limits, taking into account subclinical extension.

Subclinical extension.

- Basal cell carcinoma: 3-5 mm margin reaching deep into the hypodermis; margin
of 8-10 mm in the case of scleroderma-like basal cell carcinoma [13].
- Squamous cell carcinoma: 8-10 mm margin

Reconstructive strategies of upper and lower lips :

After directed wound healing and direct suturing, this mainly involves the use of grafts and flaps [7].
Flaps :
Three main types of flap are used to repair loss of labial substance.
three main types of flap, which we have grouped according to their mode of movement. These are
advancement, rotation and transposition flaps.

Advancement flaps :

A wide range of advancement flaps are available, and are used frequently used. Those used for labial reconstruction have the particularity of mobilizing labial and jugal tissues and jugal tissues to minimize distortion of the vermilion.

Their incisions are "hidden" in natural folds (alogeal, nasolabial folds, labial folds, cutaneous-mucosal junction line).

They may be unilateral if the defect is lateral, or bilateral if it is medial. In the upper lip, we mobilize and jugal tissues as much as possible, and the philtrum as philtrum to a minimum, to avoid distortion of the flap and aesthetic result.

Camille Bernard flap :

Described by Bernard in 1853 [14, 15], this technique is designed to repair large losses of substance, or even the entire lower lip, using two cheek advancement flaps.

Two jugal triangles (in the commissural regions) must be excised with an inferior base, half the size of the loss of substance. of the loss of substance. The lateral labiomental the lateral labiomental margins and suture them together on the median line. The red lip is reconstructed using two mucosal flaps taken from the inner surface of the cheeks

or by a free mucosal graft .For total lip reconstruction lip, results are poor, with retrocheilia, malocclusion and salivary incontinence, as there is no reconstruction of the the orbicularis muscle webbing.

Numerous modifications have been made to the shape and position of incisions and excisions (Webster, Fries) [16, 17].

Meyer [15] ideally places these excision triangles in such a way as to scars along the cutaneous-mucosal junction line.

These modifications can be combined with one another to best suit the clinical situation.

Rotational flaps :
What these flaps have in common is that they perform a rotation lower base to reconstruct the upper lip, and vice versa for the and vice versa for the lower lip. The incisions are made along the labiogenial folds. A back-cut improves flap mobility. We will two examples.

"Fan flap
This flap was described by Gillies in 1920 [16], and enables the reconstruction of a hemillip with the juxtacommissural healthy lip. Used bilaterally, it enables reconstruction of an entire lip. Cut to full thickness, its displacement is improved by a back-cut. It uses the tissue reserve of the commissural region, and is deployed around it like a fan. It induces a relative microstomy when used bilaterally.

Karapandzicflap :
Described by Karapandzic in 1974 [18], the principle of pericommissural rotation is the same. Incisions are placed along labiomental and nasolabial folds to the wings of the nose. It is classically used to reconstruct the lower lip lip (up to three-quarters of it). Facial vessels must be dissected and isolate the orbicularis muscle fibers. The aesthetic and functional results. The reconstructed is sensitive and continuous. Sphincter function is preserved is preserved, and rehabilitation improves microstomy. If this is not the case, secondary commissuroplasty is required.

Conclusion:-

Cancers of the lips pose a twofold therapeutic problem: the first is carcinological, requiring the widest possible exeresis, and the second is functional and aesthetic, calling for several repair procedures. The prognosis depends on the stage of diagnosis and therapeutic management; hence the importance of early diagnosis. True management of lip cancer must take into account the preventive aspect of this pathology, which necessarily involves educating the population.

References:-

[1] Caix P. Anatomie de la régionlabiale. Ann ChirPlastEsthet 2002;47: 332-45
[2] BellavoirA.Anatomie des lèvres. Configuration extérieure et dispositifmusculaire. In: Lévignac J, editor. Chirurgie des lèvres. Paris: Masson; 1990. p. 3-11.
3 Auriol M-M, Le Charpentier Y. Histologie de la muqueusebuccale et des maxillaires. EMC Stomatologie 1998;22-007-M-10
4. Beauvillain de montreuil C, Dréno B, Tessier M-H. Tumeursbénignes et malignes des lèvres. EMC Oto-rhino-laryngologie 1998 ;20-625-A-10
5. Kerawala C J. Acantholytic squamous cell carcinoma of the oral cavity: a more aggressive entity? British Journal of Oral and Maxillofacial Surgery 2009;47:123–25.
-6McGuire J F, Norman N G, Dyson D. Nonmelanoma skin cancer of the head and neck I: histopathology and clinical behaviour American Journal of Otolaryngology–Head and Neck Medicine and Surgery 2009;30:121–133.
7 Pons Vicente O, Almendros Marqués N, Berini Aytés L. Minor salivary gland tumors: A clinicopathological study of 18 cases. Med Oral Patol Oral Cir Bucal. 2008 ;13;9:E582-8.
8 Bonnetblanc J-M. Tumeurscutanéesépithéliales et mélaniques :carcinomescutanés. Annales de dermatologie et de vénéréologie 2008 ;135S :F134—F140.
9. Beauvillain de montreuil C, Dréno B, Tessier M-H.
Tumeursbénignes et malignes des lèvres.
EMC Oto-rhino-laryngologie 1998 ;20-625-A-10

10. Perrinaud A.
Carcinomesépidermoïdes.
Presse Med. 2008;37:1485–9.
11. Ben Slama L. Carcinomes des lèvres Rev StomatolChirMaxillofac 2009 :248 ;1-6
12 Raphaël B. Évolution des idées dans la réparation des lèvres. Annales de Chirurgie Plastique Esthétique2002 ;47:402–412.
12 Bessede J-P, Sannajust J-P, Vergnolles V. Chirurgie des tumeurs des lèvres. EMC, Techniques chirurgicales - Tête et cou 2006;46-238
13 .Bonnetblanc J-M. Tumeurscutanéesépithéliales et mélaniques :carcinomescutanés. Annales de dermatologie et de vénéréologie 2008 ;135S :F134—F140.
14Bernard C. Cancer de la lèvreinférieure, restauration à l'aide de lambeaux
quadrilatèreslatéraux. Guérison1852;5:162-4.
15 Bernard C. Cancer de la lèvreinférieureopéré par un procédé nouveau.
Bull Mem Soc Chir1853;3:357.
16Dupuis A, Souquet JR. Pertes de substance de la lèvreinférieure. In:
Lévignac J, editor. Chirurgie des lèvres. Paris: Masson; 1990.
p. 155-74.
17Stricker M, Simon E, Duroure F. Les pertes de substance labialestritissulaires.
Techniques de reconstruction et indications. Ann ChirPlast
2002;47:449-78.
18 Karapandzic M. Reconstruction of lip defects by local arterial flaps. Br J Plast Surg 1974;27:93-7.