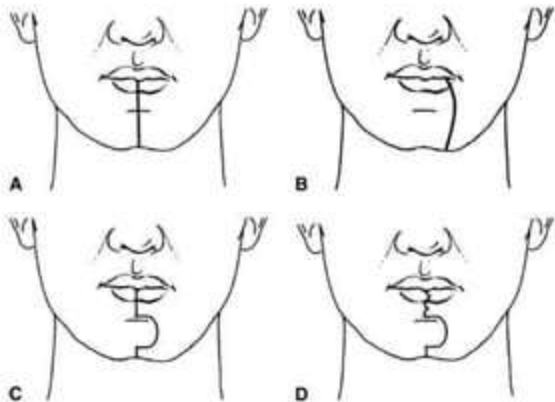


LIP- SPLITTING INCISIONS

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INTRODUCTION

- In the era of modern surgery, planning of incision has immense value.
- Surgical incisions should be planned to improve oncologic resection without compromising functional and esthetic outcomes.
- Sitting increase the visibility of natural creases. So planning requires the patient to sit upright preoperatively.

MAIN CRITERIA TO BE ACHIEVED BY THE SKIN INCISION

1. Should have clear anatomical landmarks.
2. Allow wide exposure of the surgical field.
3. Ensure adequate vascularization of the skin flaps for good healing and early initiation of RT.
4. Should be easy to repair.

MAIN CRITERIA TO BE ACHIEVED BY THE SKIN INCISION

5. Should be designed to protect important nerves.
6. Protect the carotid artery if the SCM has to be sacrificed.
7. Include scars from previous procedures.
8. Provision for extension of incision.
9. If skin needs to be sacrificed, the incision should be suitably modified.

MAIN CRITERIA TO BE ACHIEVED BY THE SKIN INCISION

10. Facilitate the use of reconstructive techniques.
11. Produce acceptable cosmetic results with minimal functional sequelae.
12. Should be readily teachable.

IDEAL MENTO-LABIAL INCISION

- Result in no vermilion contracture.
- Not interrupt the smooth, round contour of the chin skin.
- Not injure the facial and mental nerves.
- Muscle-dividing cuts should be parallel to the fibres.

BASIC UNDERSTANDING



- Scar contracture, notching at the vermilion-cutaneous border and disruption of the round smooth chin pad contour.



- Interrupt the depressor muscles causing functional consequences.



- Interrupt the mandibular branch of the facial nerve and fibres of masseter and buccinator.

RELEVANT ANATOMY

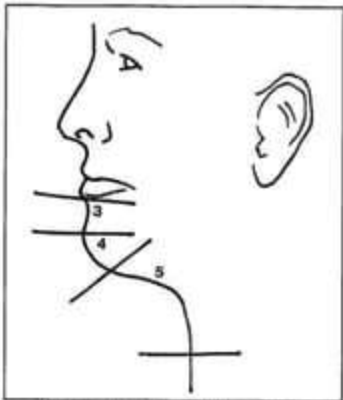


Fig. 3. Profile view of the lip, chin, and neck shows that the lip splitting incision must cross over several concave and convex surfaces. 3 = labiomental; 4 = mental; 5 = mental-mandibulo-cervical.

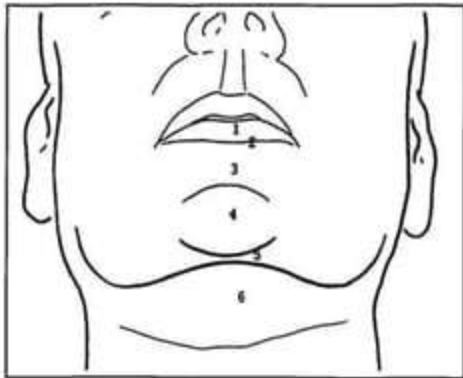


Fig. 4. Proposed lip, chin, and neck subunit classifications in lower lip splitting. 1 = vermilion; 2 = white roll; 3 = labiomental; 4 = mental; 5 = mentomandibular; 6 = mandibulo-cervical.

RELAXED SKIN-TENSION LINES



- Oriented along the furrows formed when skin is relaxed. The resting tone and contractile forces of underlying facial musculature contribute to RSTLs.
- Unlike wrinkle lines, RSTLs are not clearly visible on the skin. While pinching the skin, however, RSTLs can be observed from the furrows and ridges thus revealed.

RELAXED SKIN-TENSION LINES



- The closer an incision comes to lying within an RSTL, the better the ultimate cosmetic appearance of the scar.
- If possible, avoid making incisions perpendicular to RSTLs.
- In addition, adherence to techniques of tensionless wound closure, wound edge eversion, and atraumatic handling of tissues optimizes scar appearance.

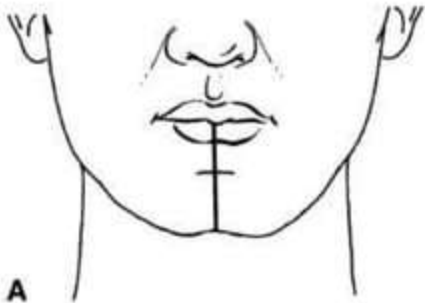
LIP-SPLITTING INCISIONS

- Improve oral access to pathological conditions of the maxillofacial region.
- The lower lip split with mandibulotomy displays the oral cavity, pharynx and upper cervical spine.
- The upper lip split displays the maxilla.
- If the disarticulated maxilla is pedicled to the cheek flap, the paranasal sinuses, the nasopharynx and the base of skull become readily accessible.

LOWER LIP-SPLITTING INCISIONS

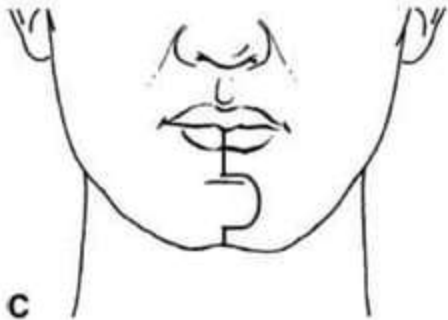
ROUX-TROTTER INCISION

- Roux in 1839, Trotter extended



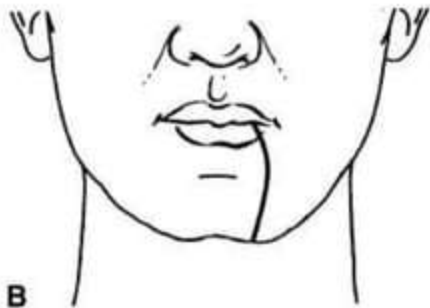
- Lies in a relaxed skin tension line and minimises injury to the muscles, vessels and nerves.
- Produce an unsightly scar, lip vermilion notching and loss of chin pad contour; but near-normal sensation and function.
- Late – scar contracture.

McGREGOR INCISION



- Follow the outline of the labiomental groove and chin prominence.
- Breaks up the straight line of the scar and attempts to conceal the incision in the skin crease.
- Crosses vertical relaxed skin tension lines to produce a more noticeable scar.

ROBSON INCISION

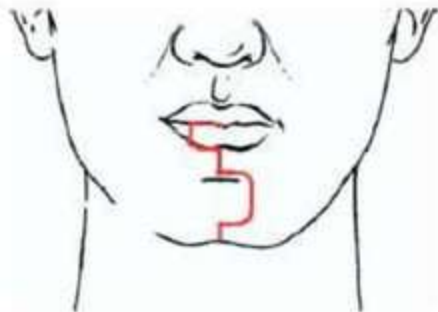


- Produce an unobtrusive (better-looking) scar.
- However, this lateral approach will damage the terminal branches of the facial and mental nerves – decreased sensation, impaired lip mobility, embarrassing incontinence.

CAUSES OF ORAL INCONTINENCE IN PATIENTS HAVING ABLATIVE SURGERY

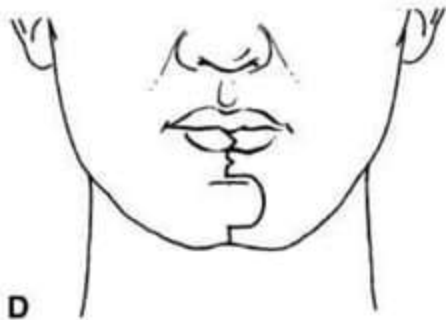
- Lip-splitting incision
- Scarring and loss of facial nerve function
- Inferior alveolar nerve injury
- Removal of teeth and underlying bony structures

BHATT INCISION



- Above the labiomental groove, take the skin incision up to the vermilion but not across it. Instead, the incision is taken along the vermilion border with skin and then across vertically and brought back to the midline on the mucosal side of the lip thus creating a **vermilion flap**.

HAYTER INCISION



- Modified the McGregor incision to incorporate a chevron into the vermilion margin and midline lip (mentolabial groove) incisions that facilitates accurate apposition of the vermilion border.
- ONE OF THE BEST

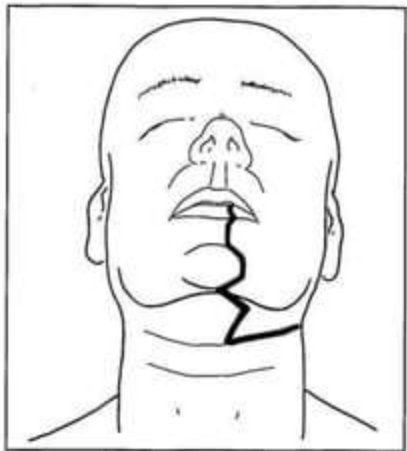
chevron

noun

- a V-shaped line or stripe, especially one on the sleeve of a uniform indicating rank or length of service.

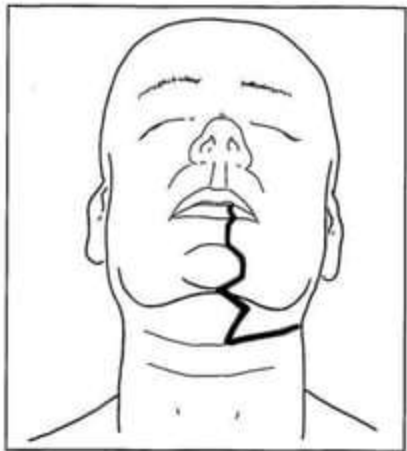


RASSEKH INCISION



- Begins with an off-midline incision through the vermilion with a horizontal Δ flap at the border.
- Extended vertically to just above the mental crease.
- Half-hexagonal flap.
- Moderately sized Δ flap.
- Connects with a high cervical incision.

RASSEKH INCISION

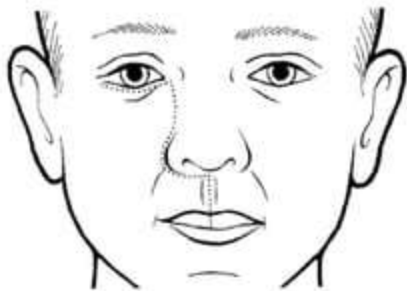


- DLI divided medially along a course parallel to its fibres.
- OO divided perpendicular to its fibres.
- DAO, mentalis, buccinator not violated.
- VII N not divided.
- SIMILAR TO HAYTER'S

UPPER LIP-SPLITTING INCISIONS

WEBER-FERGUSON INCISION

WEBER-FERGUSON



- A midline split of the upper lip to the base of the columella and then deviated to follow the nasal contour to the medial canthus on the side to be exposed.
- Then an infra-orbital lateral extension of the incision from the medial canthus to enhance exposure of the maxilla

ALTEMIR INCISION

ALTEMIR



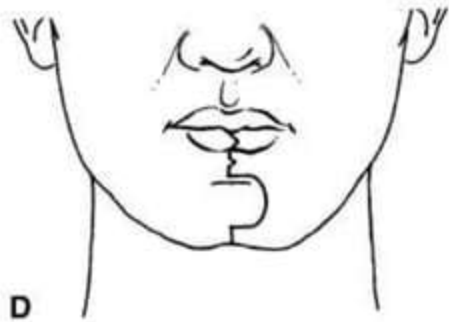
- A straight line lip split along the philtral crest which is then extended as for the WeberFerguson incision.
- Also a palatal incision, for osteotomy cuts to allow mobilisation of the maxilla pedicled on the cheek soft tissues.

HAYTER INCISION



- A chevron is incorporated into both the vermilion margin and midline lip incisions and extended to the orbicularis oris which is divided in the midline.
- The wounds are closed in layers with accurate apposition of the vermilion border.

HAYTER INCISIONS



ADVANTAGES OF MODIFICATION

- There are more landmarks for accurate wound closure.
- Avoids straight line contracture, especially across the perioral skin.
- The stigmatising appearance of a lip split is avoided by the broken line of the peri-oral scar.

The prime benefit of this simple modification is to disguise the peri-oral scar to improve the aesthetic result.

TO ACHIEVE BEST RESULTS...

- Adherence to the basic surgical principles.
- Correct closure of the incision.
 - Suturing in layers.
 - Careful approximation of previously determined skin points.
 - Proper alignment of the vermilion border.

Surgical Incisions: Balancing Surgical and Cosmetic Outcomes in Head and Neck Oncosurgery

Jagadish Tubachi, Vivek Jainkeri, Vinay Gadagi, Prasad Gunari

It is logical for the beginners to start neck dissection with Crile's and later switch to MacFee.



**THANK
YOU**