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[]

% Straight line % Rotation advancement %
% (Malalignment Deficiency)
Rotation advancement Straight line Short lip
(P < 0.05)

Lower lip Z-plasty Straight line repair
() (Randal-Tennison, LeMesurier)

Cupids bow

()

(Millard)

Upper and lower lip Z-plasty Upper lip Z-plasty

Malalignment deficiency

Malalignment

Orbicularis muscle deformities

Rotation advancement

() Rotation advancement

(P< /)

Straight line

() ()

() Straight line

Short lip

(Microform

Lower lip Z-plasty

(P< /)

Straight line

Rotation adv. Straight line

() () () () ()

Deformity of vermillion border (malalignment)

Vermilion deficiency (notch,whistle)

Unacceptable scar (hypertrophied,depressed,wide)

Short lip

Long lip

Wide lip

Tight lip

Philtral column/cupids bow deformity

Orbicularis muscle deformity

()

()

()

Straight line

Rotation advancement

%

mismatch

()

(%) Stright line (%) Millard

(%) Z-plasty

()

(Deficiency Malalignment)

Short lip

%

() Long lip ()

()

()

(Rotation)

()

()

Short lip

()

Rotation advancement

Straight line

Rotation advancement

(% %)

Tight lip

()

()

Maxillary orthopedics

()

Skin hook

Short lip Bulging

(

()

)

REFERENCES

1. Habib Z. Factors determining occurrence of cleft lip and palate. *Surg Gynecol Obstet* 1978; 146: 105.
2. Fogh-Anderson P. Inheritance of harelip and cleft palate Copenhagen. Ejuar Munksgard Forlag 1943; 2: 23-9.
3. Kim S, Kim WJ, Oh C. Cleft lip and palate incidence among the live births in the republic of Korea. *J Korean Med Sci* 2002; 17: 49.
4. Staffenberg DA, Wood RJ. Secondary deformities of cleft lip repair. In: Aston SJ, Beasley RW, Thorne CHM, editors. *Grabb and Smith's plastic surgery*. 5th ed. Philadelphia: Lipincott-Raven. 1997; P: 271.
5. Stal S, Hollier L. Secondary deformities of the cleft lip, nose and palate. In: *Mathes plastic surgery*. Vol 4. Philadelphia: Saunders. 2006; P: 339-51.
6. Stal S, Hollier L. Correction of secondary clef deformities. *Plast Reconstr Surg* 2002; 109: 1672-81.
7. Mulliken J. Repair of bilateral complete cleft lip and nasal deformity: state of art. *Cleft Palate Craniofac J* 2000; 37: 342.
8. Losee JE, Selber JC, Arkoulakis N, Serletti JM. The cleft lateral lip element: Do traditional marking result in secondary deformities? *Ann Plast Surg* 2003; 50: 594- 600.
9. Assuncao G. The VLS classification for secondary deformities in the cleft lip: clinical application. *Br J Plast Surg* 1992; 45: 288.
10. Bardach J, Salyer K, editors. *Atlas of craniofacial and cleft surgery*. Cleft lip and palate surgery. Vol 2. Philadelphia: Lippincott-Raven. 1999; P:434-64.
11. Kawamoto HK Jr. Correction of major defects of the vermilion with a cross-lip vermilion flap. *Plast Reconstr Surg*. 1979 Sep;64(3):315-8.
12. Hubli EH, Salyer KE, Genocov DG. Secondary cleft lip and nasal deformities. In: Achauer BM, editor. *Plastic surgery: indications, operations and outcomes*. Missouri: Mosby. 2000; P: 835-49.
13. Lee TJ. Upper lip measurements at the time of surgery and follow-up after modified rotation advancement flap repair in unilateral cleft lip patients. *Plast Reconstr Sureg* 1999; 104: 911-5.
14. Stal S, Spirta M. Secondary reconstructive procedures for patient with cleft. In: Serafan D, Gorgiade NG. *Pediatric Plastic Surgery*. Vol 4. Missouri: Mosby. 1984; P: 352.