

11 ( )

\*

[ ]

%	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

---

)

( ) ( )

% ( )

Comissure )

(Cupids bow

(Columella Cupids bow )

)

(

(Cupids bow )

( )

Orbicularis oris deformities

Philteral column /Cupids bow deformities  
 (hypertrophied depressed wide) Unacceptable scar  
 Tight lip (Step-Off)Vermilion malalignment  
 Vermilion deficiency(notch Whistle) Wide lip  
 Short lip Long lip

Malalignment deficiency

**Malalignment**

Orbicularis muscle deformities

Rotation advancement (P< / )	Straight line Short lip (P< / )	( ) ( ) (Microform Straight line	Rotation advancement ( ) Straight line Lower lip Z-plasty
---------------------------------	---------------------------------------	--	---

**Rotation adv. Straight line**

( )	( )	( )	( )	( )
<hr/>				
Deformity of vermillion border (malalignment)				
Vermilion deficiency (notch,whistle)				
Unacceptable scar (hypertrophied,depressed,wide)				
Short lip				
Long lip				
Wide lip				
Tight lip				
Philteral column/cupids bow deformity				
Orbicularis muscle deformity				

---

( )

( )

( )

Straight line      Rotation advancement

%

mismatch

( )

(% ) Straight 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*. 5<sup>th</sup> 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 cleft 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 vermillion with a cross-lip vermillion 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, Spirita M. Secondary reconstructive procedures for patient with cleft. In: Serafan D, Gorgiade NG. *Pediatric Plastic Surgery*. Vol 4. Missouri: Mosby. 1984; P: 352.