

//
//
//

()

*

(Tissue expansion) :

(Over expansion)

Advancement ()

% () :

(Rectangular)

Advancement :

)

(

)

Advancement (

:

:

(Flap)

TE (Tissue expansion)

()

()

TE

)

Sagital

(

TE

TE

(Internal filling port)

)

TE

TE

(

TE

TE

TE

TE

(Subfrontalis)

(Subcutaneous)

TE

TE

()

TE

TE

(Rectangular)

Advancement

()

TE

TE

Advancement

TE ()

TE (Scar revision)

(.)

TE

over)

TE

()

(expansion

()

Bauer

TE

TE

TE

Bauer

()

TE

()

% ()

%

TE

TE

TE

()

%

TE

() Haffmann

()

Zoltie

/

TE

TE

TE

Advancement

(.)

TE

:

TE

:

TE

TE

()

TE

Governa

/ ()

Keskin

/ ()

/ ()

Hirvitz

:

()

de Aguestin

TE

()

()

()

TE

TE

TE

)

(TE)

TE

(

()

TE

()

TE

Transposition

Advancement, Rotation

()

TE

Advancement

:

(Round)

Rotation

()

Advancement

)

TE

(

(Eyebrow ptosis)

Advancement

TE

REFERENCES

1. Bascom A. Tissue expansion in the head and neck: current state of the art. *Curr Opin Otolaryngol Head Neck Surg* 2002;10: 273-7.
2. Backer SR, Sowanson NA. Clinical applications of tissue expansion in head and neck surgery. *Laryngoscope* 1990; 100 (3): 313-9.
3. Bauer BS, Few JW, Chavez SD, Galiano RD. The role of tissue expansion in the management of large congenital pigmented nevi of the forehead in the pediatric patient. *Plast Reconstr Surg* 2001; 107(3): 668-75.
4. Mohammad A. The effect of tissue expanders on the growing craniofacial skeleton. *Indian J Plast Surg* 2006; 39(1): 22-8.
5. Lee S, Rafii A, Sykes J. Advances in scalp reconstruction. *Curr Opin Otolaryngol Head Neck Surg* 2006; 14: 49-53.
6. Zoltie N, Chapman P, Joss GS. Tissue expansion: a unit review of non-scalp, non-breast expansion. *Br J Plast Surg* 1990; 43(3): 325-7.
7. Hassanpour E, Mafi P, Mozafari N. Reconstruction of major forehead soft tissue defects with adjacent tissue and minimal scar formation. *J Craniofac Surg* 2005; 16(6): 1126-30.
8. Sharobarov VI, Moroz VY, Starkov YG, Strekalovsky VP. First experience of endoscopic implantation of tissue expanders in plastic and reconstructive surgery. *Surg Endosc* 2004; 18 (3): 513-17.
9. Hoffmann JF. Tissue expansion in the head and neck. *Facial Plast Surg Clin North Am* 2005; 13(2): 315-24.
11. Keskin M, Kelly CP, Yavuzer R, Miyawaki T, Jackson IT. External filling ports in tissue expansion: confirming their safety and convenience. *Plast Reconstr Surg* 2006; 117 (5):1543-51.
12. Chun JT, Rohrich RJ. Versatility of tissue expansion in head and neck burn reconstruction. *Ann Plast Surg* 1998; 41(1): 11-6.
13. Logiudice J, Gosain AK. Pediatric tissue expansion: indications and complications. *J Craniofac Surg* 2003; 14(6): 866-72.
14. Tavares Filho JM, Belerique M, Franco D, Porchat CA, Franco T. Tissue expansion in burn sequelae repair. *Burns* 2007; 33(2): 246-51.
15. Pisarski GP, Mertens D, Warden GD, Neale HW. Tissue expander complications in the pediatric burn patient. *Plast Reconstr Surg* 1998; 102(4): 1008-12.
16. Governa M, Bonolani A, Beghini D, Barisoni D. Skin expansion in burn sequelae: results and complications. *Acta Chir Plast* 1996; 34: 147-53.

-
17. Hurvitz KA, Rosen H, Meara JG. Pediatric cervicofacial tissue expansion. *Int J Pediatr Otorhinolaryngol* 2005; 69(11): 1509-13.
 18. de Aguestin JC, Morris SF, Zoker RM. Tissue expansion in the reconstruction of post-burn lesions in childhood. *Cir Pediatr* 1994; 7(4): 174-8.
 19. Friedman RM, Ingram AE Jr, Rohrich RJ, Byrd HS, Hodges PL, Burns AJ, et al. Risk factors for complications in pediatric tissue expansion. *Plast Reconstr Surg* 1996; 98(7): 1242-6.
 20. Piccolo-Daher R, Ribeiro P, Piccolo-Daher S, Piccolo P, Piccolo N, Piccolo-Lobo R, et al. Tissue expansion-associated factors and complications-a retrospective study. *Burns* 2007; 33(1): 143.
 21. Gibstein LA, Abramson DL, Bartlett RA, Orgill DP, Upton J, Mulliken JB. Tissue expansion in children: a retrospective study of complications. *Ann Plast Surg* 1997; 38(4): 358-6.
 22. Hudson DA. Maximizing the use of tissue expanded flaps. *Br J Plast Surg* 2003; 56: 784-90.