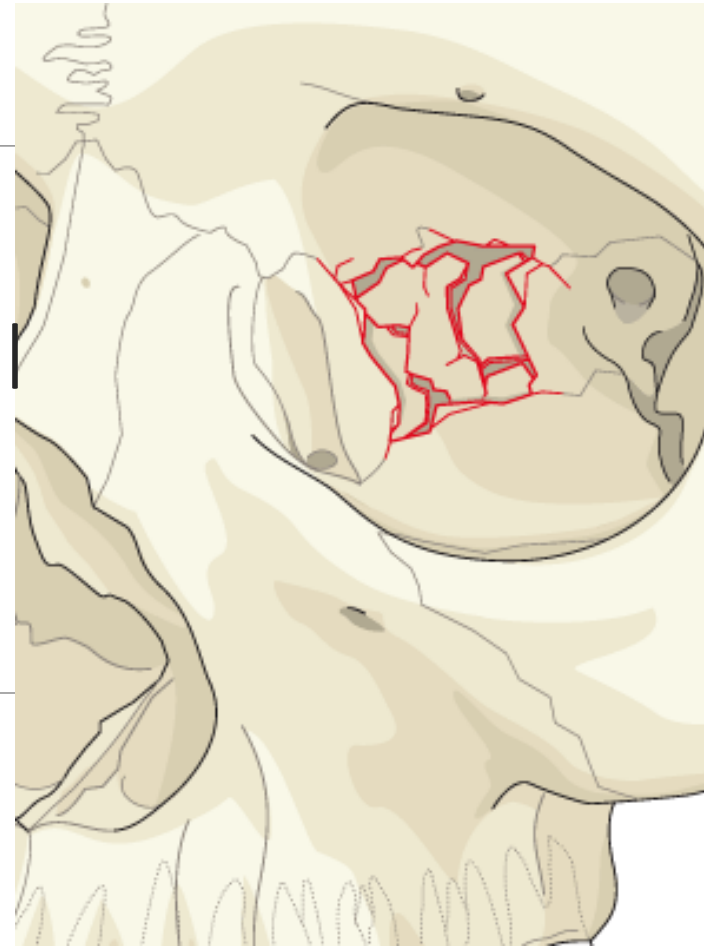

Management of Medial Orbital Wall Fractures and Literature Review

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NOTHING TO DISCLOSE



INTRODUCTION



❖ Incidence

- ❖ a subset of orbital Fx.(13.3% of all facial bone Fx.)
 - ❖ Isolated medial wall: 0%-55%.
 - ❖ Combined orbital floor: 10% to 84%.

❖ *PRS 1999;103:1839-1849*

❖ *PRS 1997;100:1409-1417*

❖ Important cause of posttraumatic enophthalmos

❖ Indications: large defects, early or persistent enophthalmos, diplopia and rectus muscle entrapment.

❖ *Orbit 2005;24:1-9*

❖ *J Craniomaxillofac Trauma 1998;4:7-12*

❖ *Laryngoscope 2002;112:986-989*

❖ *Curr Opin Ophthalmol 2003;14:236-240*

The purpose of this article

- ◆ Review the outcomes of the medial orbital wall
Fx. pts
- ◆ Review the recommendations in the current literature
- ◆ To establish our current approach and treatment protocols

MATERIALS AND METHODS

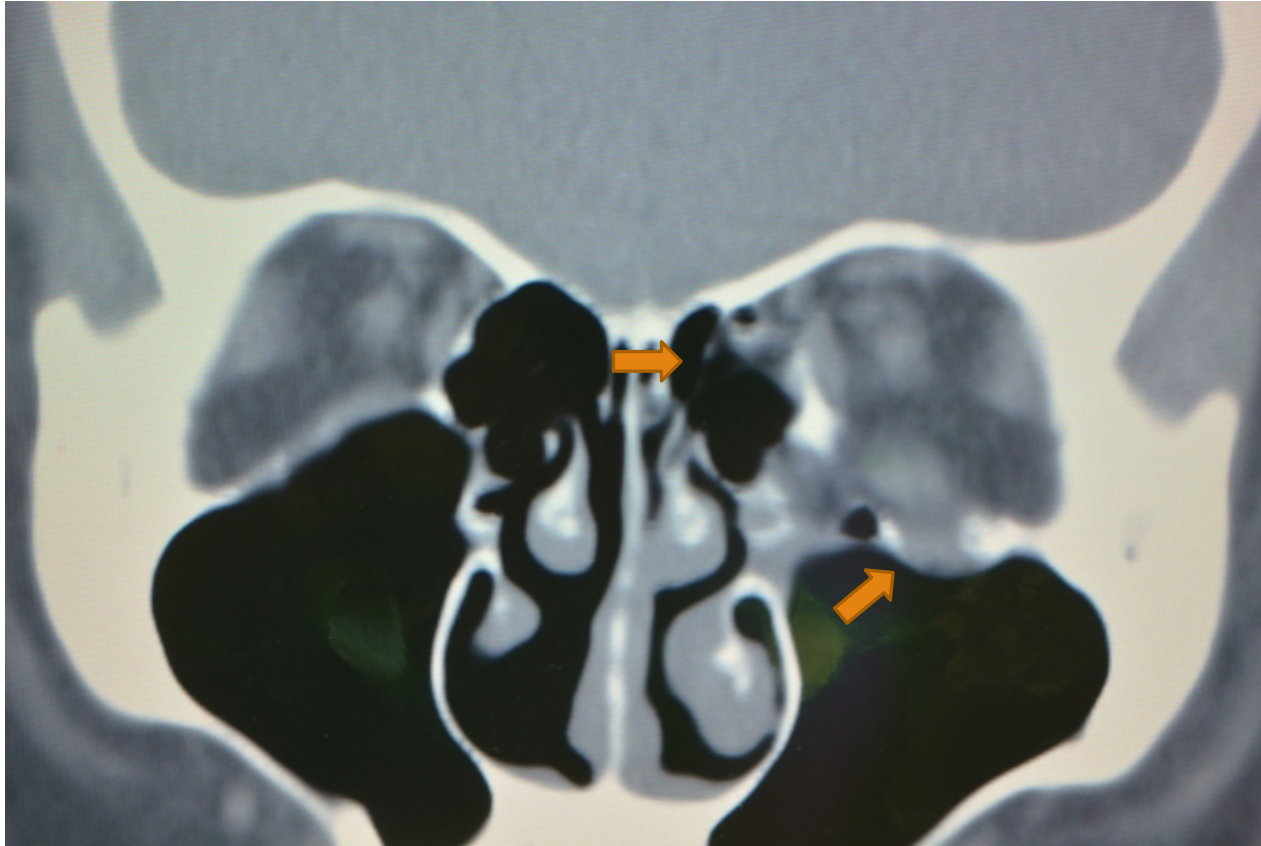
19 patients Dx, Tx surgically with orbital medial wall fracture from 2010 Oct. to 2013 Oct. in KMUH(of 1700 cases s/p ORIF)

The medical records and CT were reviewed

Analysis

- Age, sex, cause of injury, associated ocular injury, operation approach, inserted material, diplopia, EOM limitation, enophthalmos, complications, and sequela.

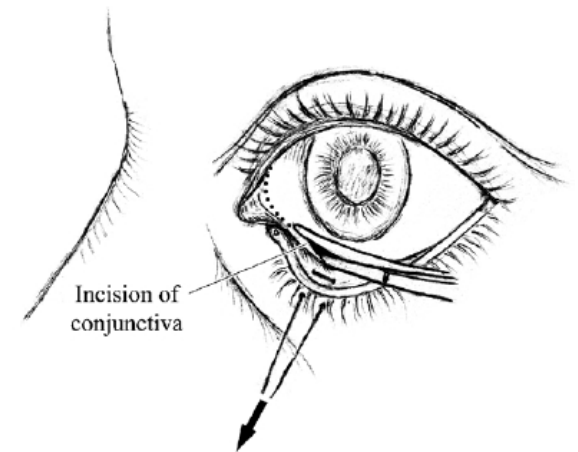
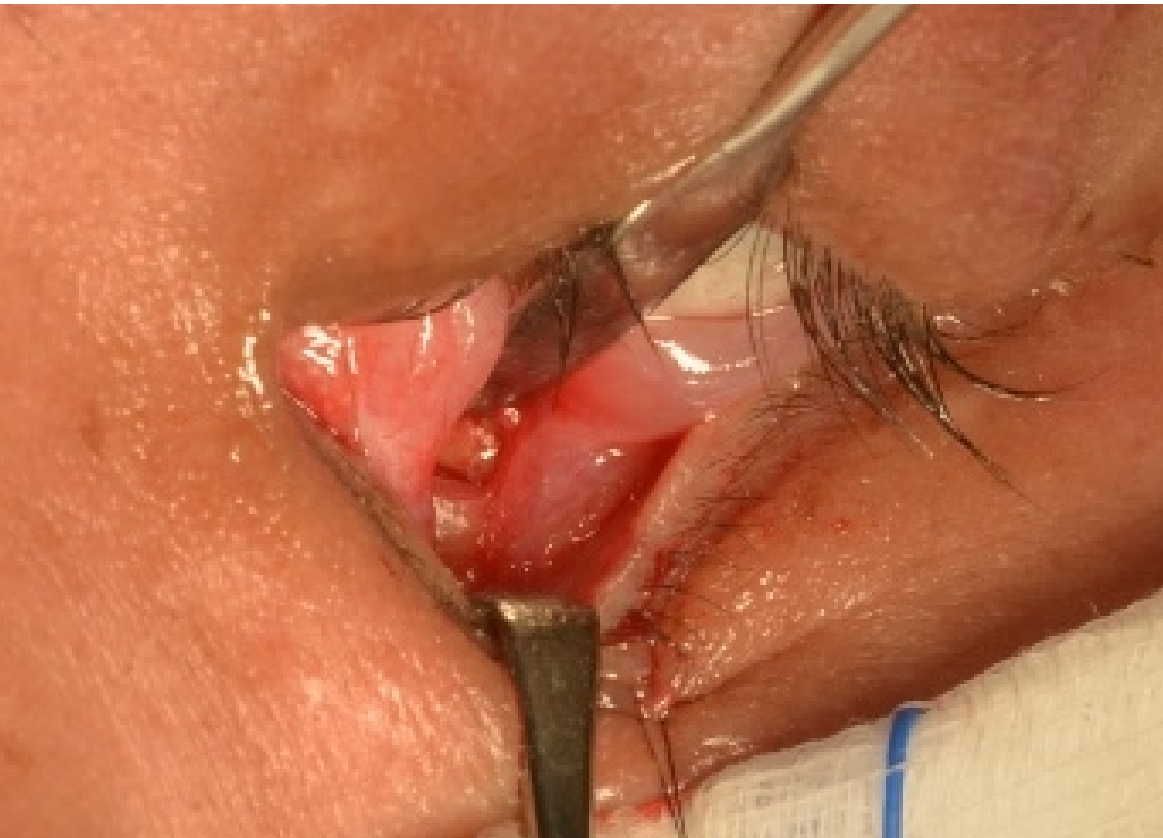
Transconjunctival with caruncular extension



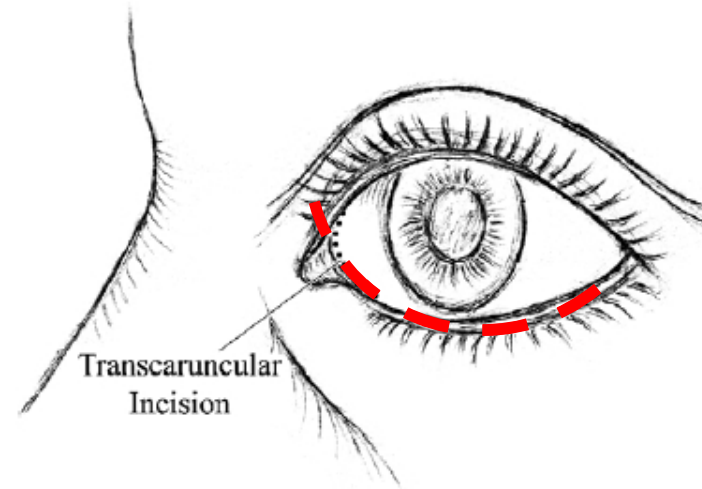
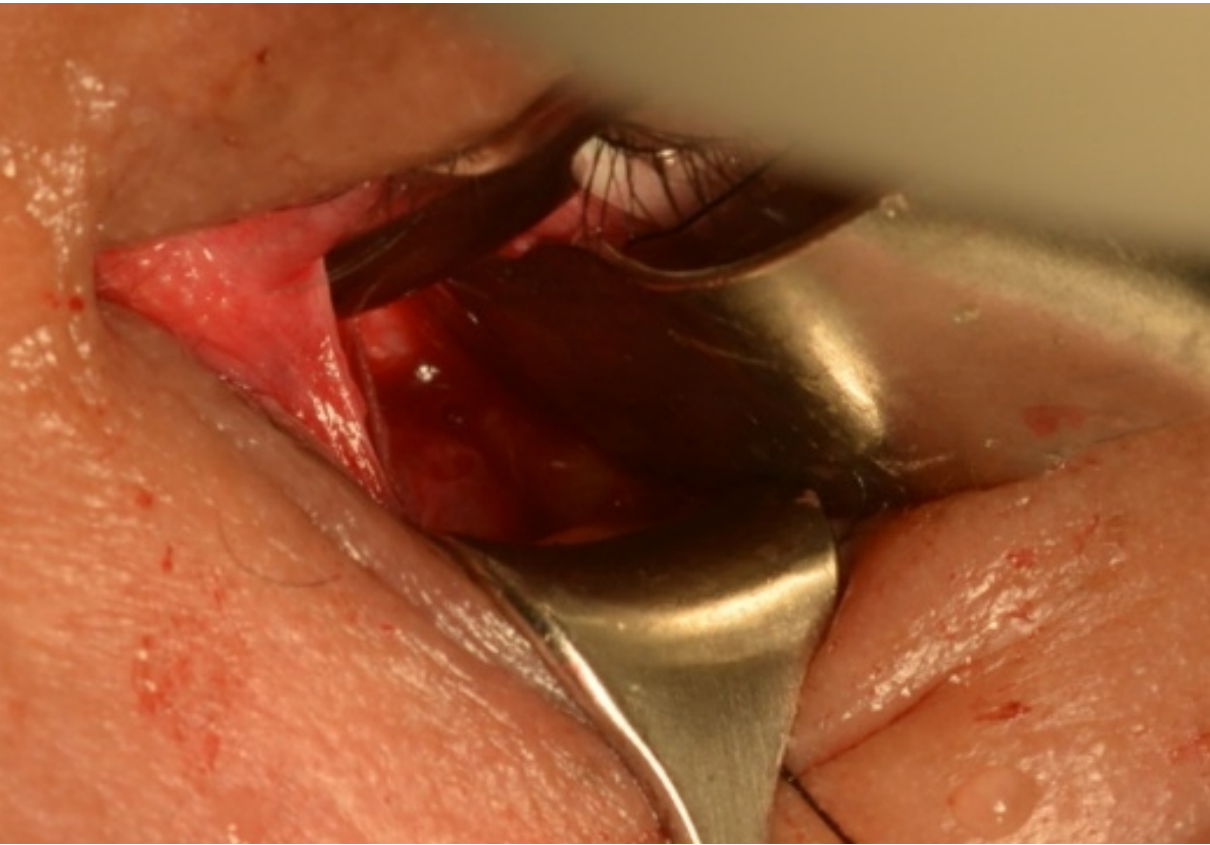


Transconjunctival with caruncular
extension
Traction suture

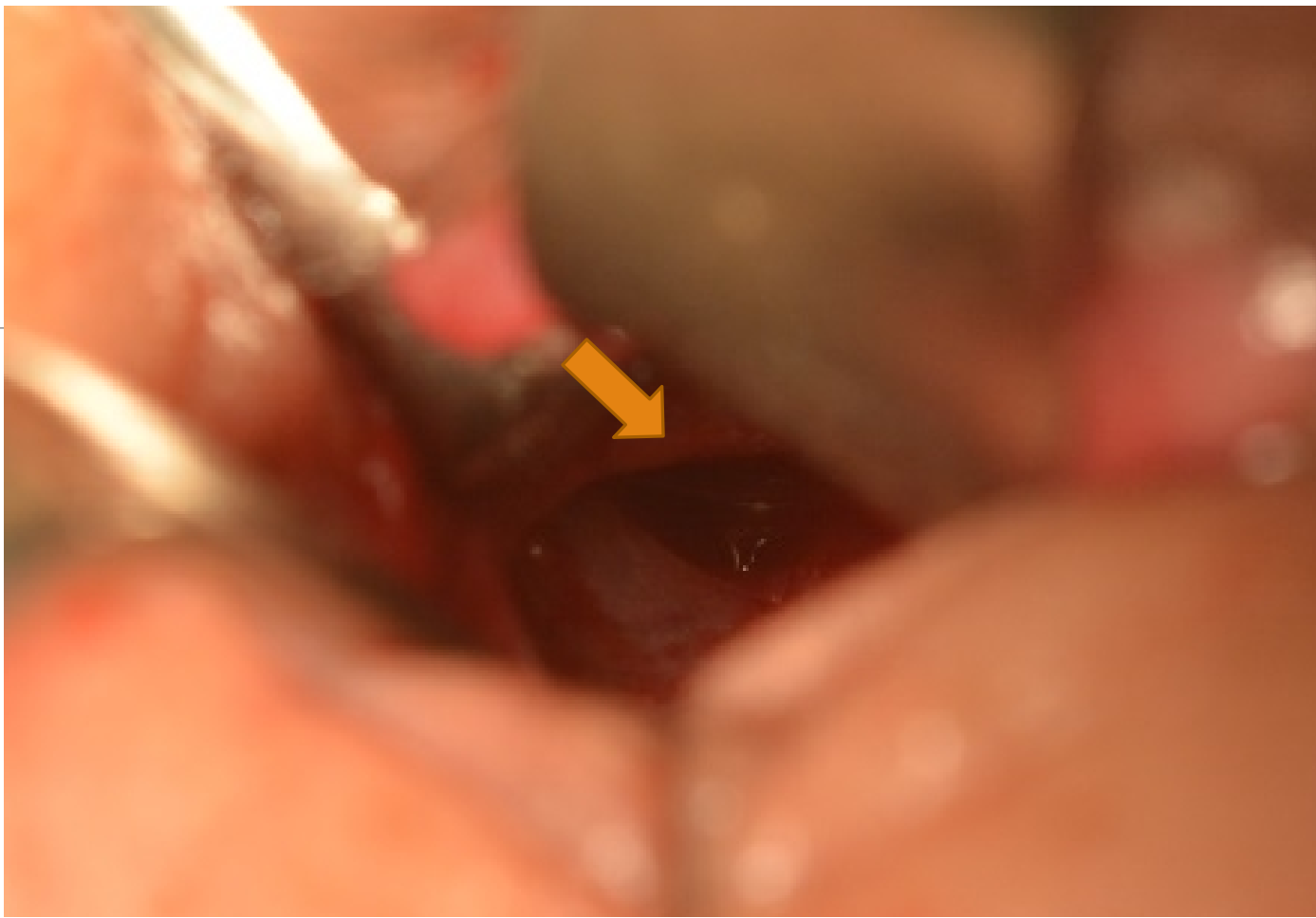
Matthew C et al. J Craniofac Surg 2012;23: 696-701)



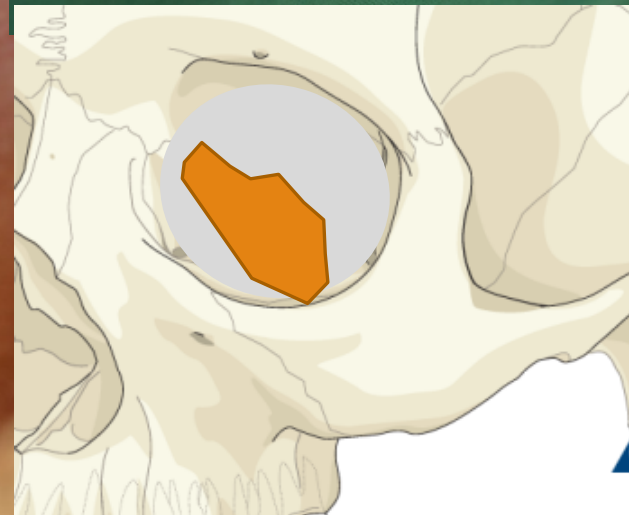
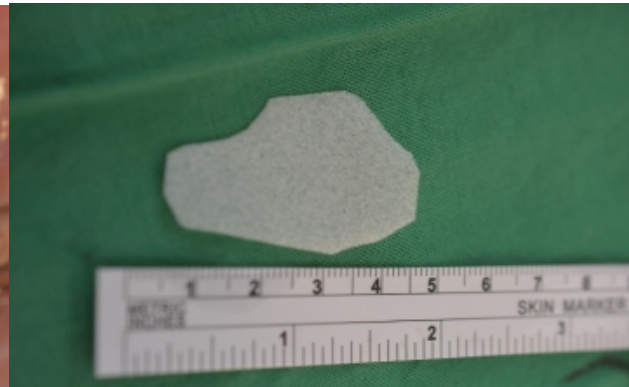
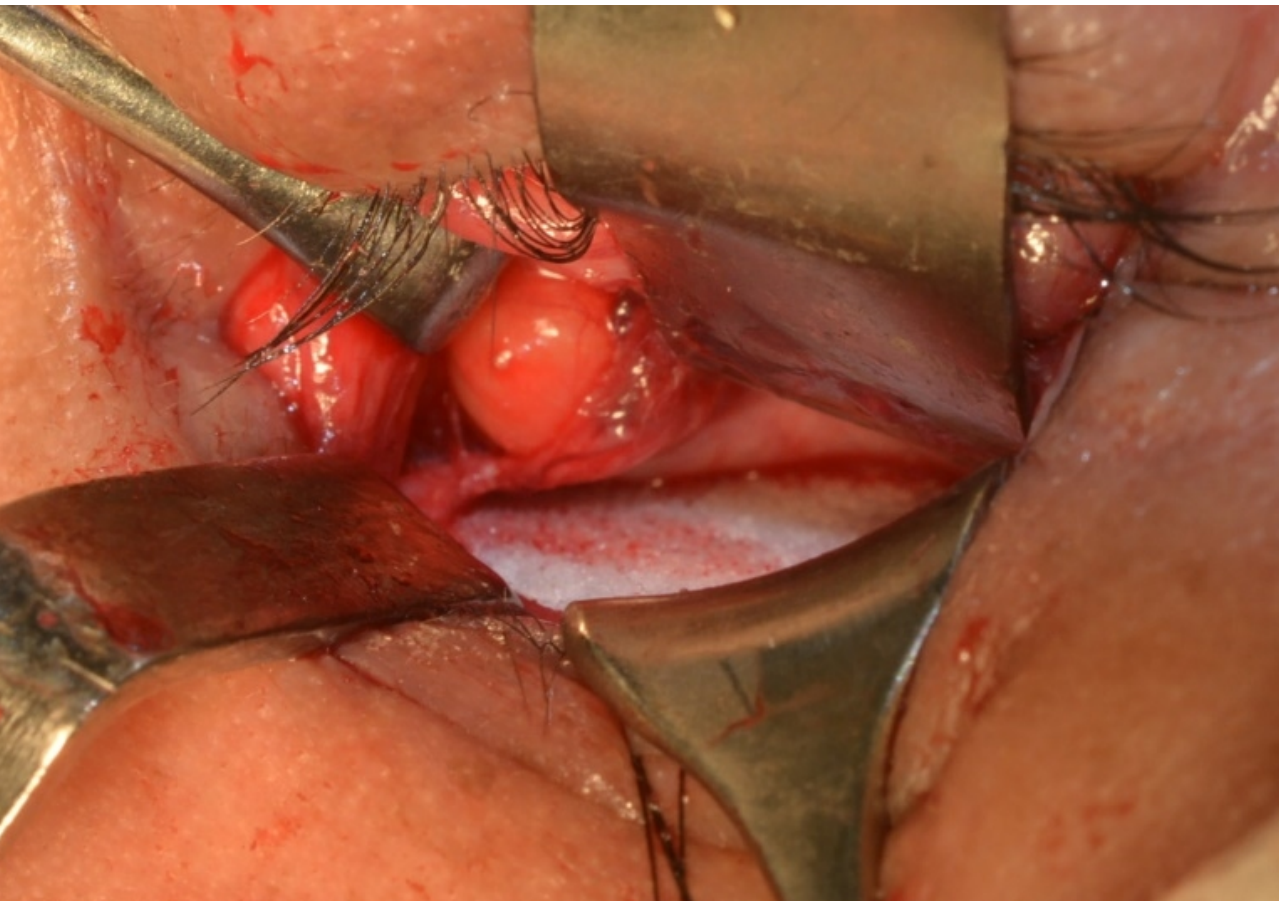
Transconjunctival with caruncular extension
Conjunctival incision



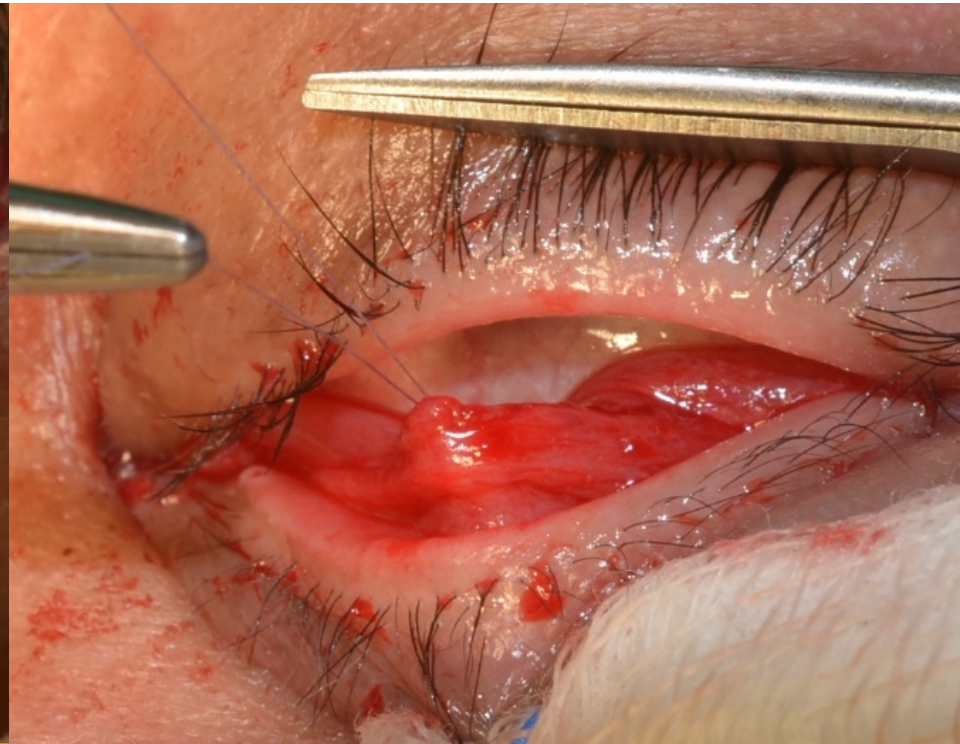
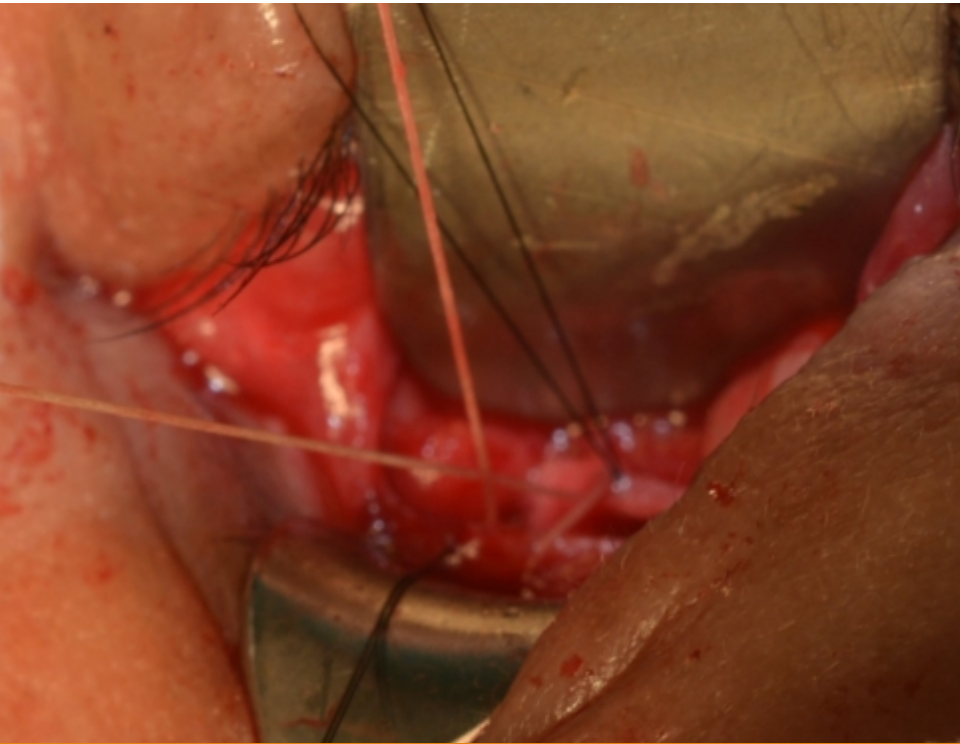
Transconjunctival with caruncular
extension
Caruncular extension through the
avascluar plane



Transconjunctival with caruncular
extension
wide exposure of entire fracture site.



Transconjunctival with caruncular extension
Medpor® placed



Transconjunctival with caruncular extension

Suture periosteum with 4-0 vicryl

Conjunctiva wound repair with 7-0 vicryl.

DISCUSSION

1. Kim S et al. Repair of medial orbital wall fracture: transcaruncular approach. Orbit 2005;24:1-9
2. Garcia GH et al. The transcaruncular approach in repair of orbital fractures: a retrospective study. J Craniomaxillofac Trauma 1998;4:7-12
3. Graham SM et al. The transcaruncular approach to the medial orbital wall. Laryngoscope 2002;112:986-989
4. Burnstine MA. Clinical recommendations for repair of orbital facial fractures. Curr Opin Ophthalmol 2003;14:236-240

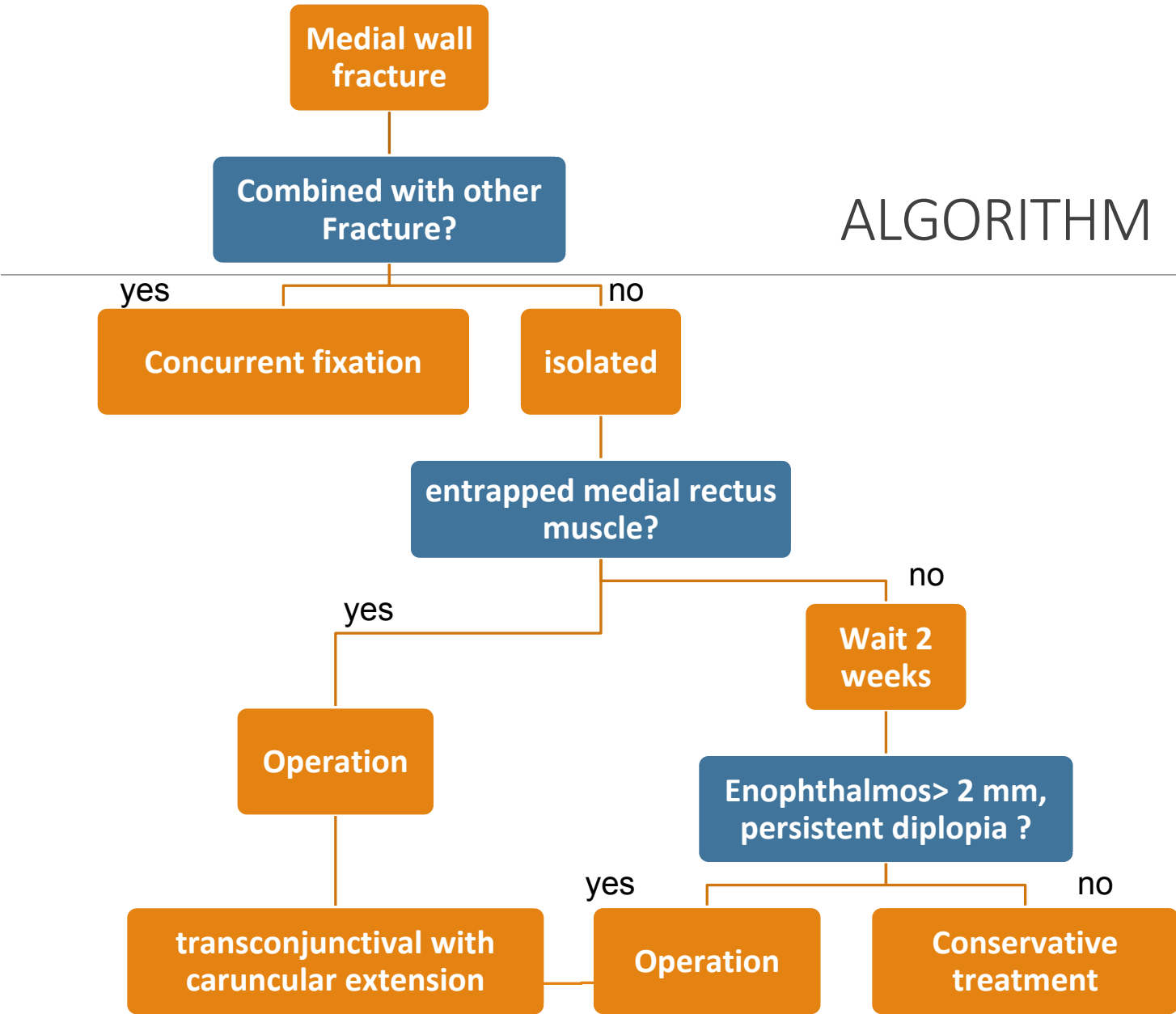
Pathophysiologic	Indication
Impair medial rectus muscle function.	Medial rectus entrapment on CT scan or PE(<i>ref.1-4</i>)
Change in orbital volume	Enophthalmos > 2 mm, persistent diplopia beyond 2 weeks from injury (<i>ref.1-4</i>)
Other	Large defects > 50% or > 2 cm(<i>ref.2</i>) Fat and soft tissue displacement

DISCUSSION

- ◇ Our overall operation complications: 5.2%
- ◇ Most studies report a operation complication rate ranging from 0% to 10%
PRS 1999;103:1839-1849
- ◇ Reviewed all studies on the transcaruncular approach
 - ◇ 11 studies, 288 patients included.
 - ◇ Incidence of complication 2.6%(n = 6)
 - ◇ 1.3%(n=3): minor complications
 - ◇ 1.3%(n=3): require a procedure

J Craniofac Surg 2012;23: 696-701

ALGORITHM



Take home message

Medial rectus entrapment on CT scan or PE need operative intervention ASAP

Transconjunctival approach with caruncular extension: satisfying functional and cosmetic results

Porous Polyethylene Sheet(Medpor) is suitable material with favorable results