

REVISTA DE
ESTRABISMO
& OFTALMOLOGIA PEDIATRICA



WSPOS
World Society of Paediatric
Ophthalmology and Strabismus



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Case Report: Monocular Maximum Surgery for Sensory Exotropia

Objective



- ✓ To present the integral symptomatic and aesthetic treatment of a patient with a history of trauma, Phthisis bulbi, strabismus, leucoma, keratopathy in a blind and red painful eye



MONOCULAR MAXIMUM SURGERY FOR XT

WALTER – 24 YEARS



BACKGROUND:

- **LEFT EYE TRAUMA:** penetrating glass wound at 13 years of age
- **Previous ophthalmic surgeries:**
 - Removal of foreign bodies and corneal sutures
 - Retinal detachment
 - Vitrectomy and silicone oil
- **Outcome:** Phthisis Bulbi, Band Keratopathy
Keratopathy, Sensory XT



MONOCULAR MAXIMUM SURGERY FOR XT WALTER – 24 YEARS



1° Ophthalmological Consultation: February 2015

- Red painful eye
- Epiphora
- Aesthetic complex
- Intolerance of ocular prosthesis and cosmetic lenses



MONOCULAR MAXIMUM SURGERY FOR XT WALTER – 24 YEARS

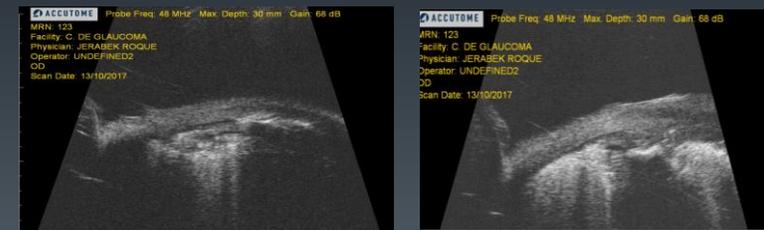
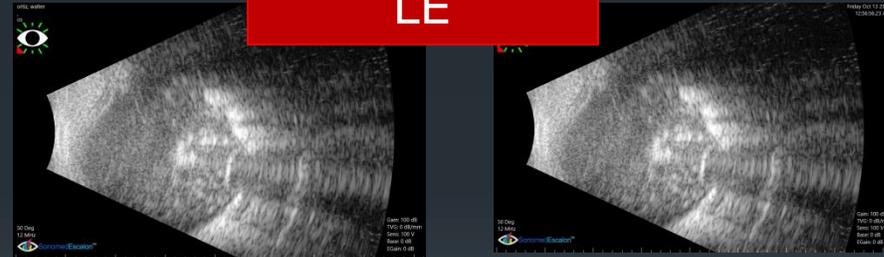
Ophthalmologic Examination

- Visual acuity: RE: 10/10
LE: no light projection
- Cycloplegic refraction: RE: +1-0,25x10°
LE: -----
- Biomicroscopy: RE: normal
LE: Keratophaty in Band
- Axial length: RE: 22.35 mm
LE: 19.64 mm
- B scan: RE: Normal
LE: Disorganization of structure, Opacities in vitreous cavity, axial length shortening
- U.B.M: RE: Normal
LE: absence of anterior chamber and collapse angle structures

Left Eye



Echography
LE



UBM LE



Ophthalmological Examination

- Ocular motility:

	XT 65	
	XT 60	
	XT 20	



- Inferior Oblique LE +2

✓ Exotropia 60 pd and IOOA in left eye

Problems:

1. Ocular surface symptoms
2. Aesthetic improvement
(Exotropia and Leucoma)



MONOCULAR MAXIMUM SURGERY FOR XT

WALTER – 26 YEARS



1° TREATMENT Left Eye: February 2015

- **Superficial Keratectomy**
- **2 layers of "Amniotic membrane graft"**



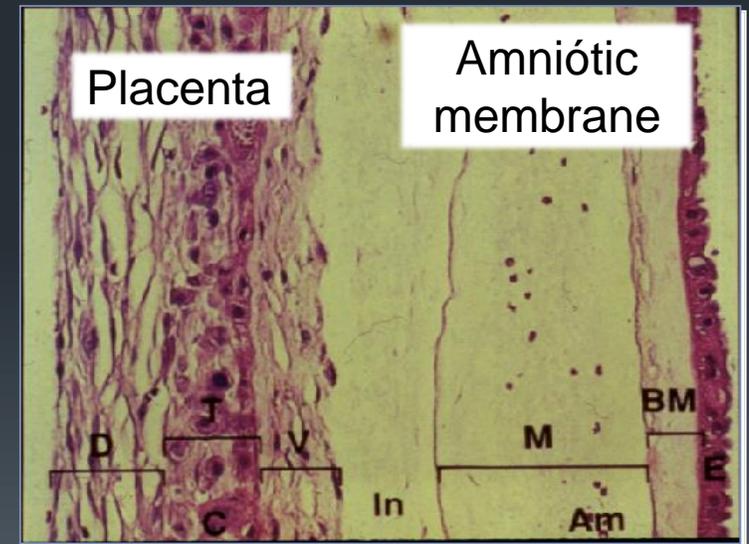
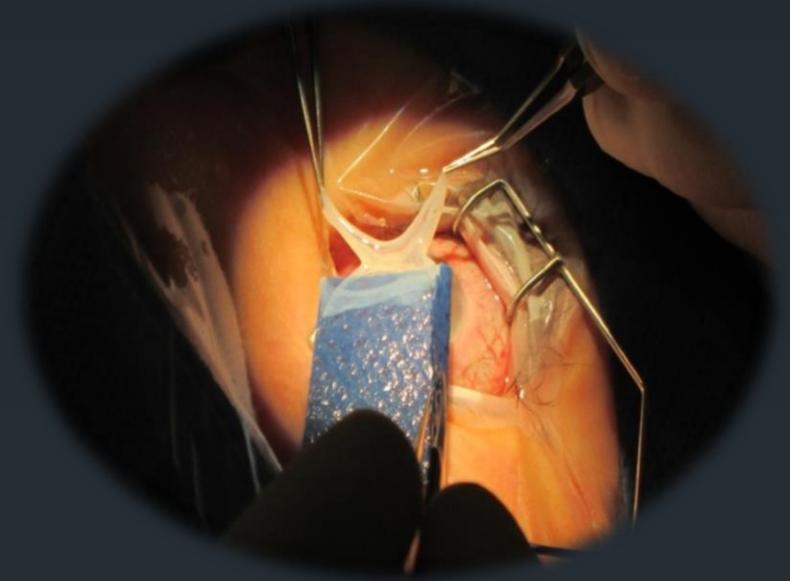
Amniotic Membrane contributes to:

- A new basement membrane as the substrate, so that the host cell proliferates and anchors over it
- An avascular stroma, not immunogenic and antiangiogenic with anticicatrical properties



Amniotic membrane

- Facilitates re-epithelialization of the ocular surface.
- Reduces inflammation.
- Inhibits neovascularization.
- Modulates the scarring and stromal fibrosis.
- Reduces pain.



MONOCULAR MAXIMUM SURGERY FOR XT

STRABISMUS TREATMENT

WALTER – 26 YEARS

* Permanent Exotropia : 15 years ago

- Aesthetic complex
- Intolerance of ocular prostheses and cosmetic lenses



XT 65

XT 60

XT 20

OI: Inferior Oblique + 2

MONOCULAR MAXIMUM SURGERY FOR XT

WALTER – 26 YEARS

2° TREATMENT : April 2015

MONOCULAR SURGERY FOR EXOTROPIA LE :

- **Lateral Rectus Resection of 12 mm with adjustable suture** (muscle contracture)
- **Medial Rectus plication of 10 mm with adjustable suture** (to preserve circulation)
- **Recession of Inferior Oblique**

Pre-op



Post-op



MONOCULAR MAXIMUM SURGERY FOR XT

Immediate Post-operative

WALTER – 26 YEARS

- * **ORT / XT 10 pd**
- * **Limitation of ABDUCTION -3 / -2**



XT 20

ORT/XT 10

ET 20

* **Sutures are removed on day 3 : WITHOUT ADJUSTMENT**

MONOCULAR MAXIMUM SURGERY FOR XT

WALTER – 26 YEARS

Immediate post-operative



• **PRE-OPERATIVE**



• **POST-OPERATIVE**



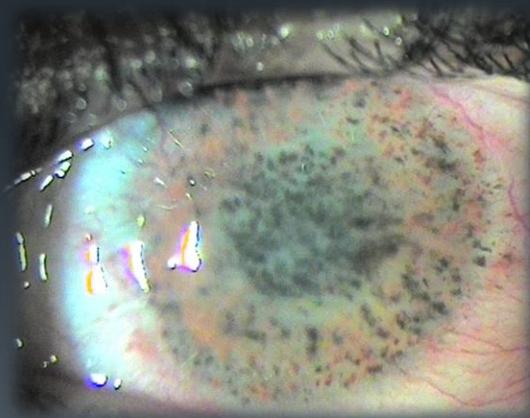
LEUCOMA TREATMENT

MONOCULAR MAXIMUM SURGERY FOR XT WALTER – 24 YEARS



3° TREATMENT: 2015 JUNE (3 SESIONS)

- **KERATOPIGMENTATION** or Tattooing of Cornea



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KERATOPIGMENTATION

Brit. M. J., 1931,
M. Ass. J., 1934.

TATTOOING OF THE CORNEA*

By J. N. Roy, M.D., F.A.C.S.

*Professor at the University of Montreal,
Montreal*

CASE REPORT

On August 21, 1936, Miss B.F., 27 years old, asked my advice for a leucoma of the left eye. She said that at the age of four years she was wounded by a fork which perforated the globe in its anterior part. The inflammatory reaction was very severe, and after infection a large ulceration of the cornea started. This ulceration lasted more than two years before complete healing took place.

On examination I observed a vast leucoma of the left cornea which had spread, in a relatively symmetrical manner, to almost all the membrane. At its periphery, where it is a naturally thinner, the whitish cicatrix invaded the deep parenchymatous layer. In the inferior segment there was a strong adhesion of the iris to the cornea. The anatomical convexity of the globe was not modified. Vision was reduced to light perception. The ocular tension was normal. A permanent divergent strabismus of the left eye of 10° existed (see Fig. 1).

The iris of the right eye was pigmented in brown. After correction the vision of this eye was excellent. R. E. 15° - 0.75 - 0.75 V-1.

For this leucoma from the aesthetic point of view, I proposed a series of tattooings with China ink. This advice being accepted, the first operation was fixed for October 7th.

exactly the same technique for each of them. At first I should say that my China ink is particularly pure, having been bought by myself in Peking at the time of a voyage in the Far East.

While I anesthetized the eye by means of a solution of cocain I reduced to an impalpable powder a small quantity of a tablet of ink. This powder was then dissolved with a drop of distilled water which gave it the consistence of a clear paste. When the local anesthesia of the cornea was terminated, I immobilized the two eyelids with a speculum, and began the tattooing at the pupil. This one, instead of being located in the middle of the globe, was placed rather slightly to the left, towards the internal canthus, in order to correct a little, from the aesthetic point of view, the divergent strabismus. I used a single needle to introduce the ink between the layers of the cornea, more or less cicatricial, in giving it an oblique direction. The tattooing of the pupil was easily done because at this spot the leucoma was very thick. As to the periphery, where the fibrous tissue was much thinner, I proceeded more delicately. After this first operation the patient returned home without any eye drops or bandage.

The sequelæ of this small intervention were absolutely normal. As my patient was very busy with her work, she came back a month later for another

Indications: In patients who do not tolerate contact lenses or ocular prosthesis and in those who are cornea transplantation, it is contraindicated

MONOCULAR MAXIMUM SURGERY FOR XT

Post-operative: 6 months

WALTER – 26 YEARS

* XT 5 / XT 10 PD

* Improved ABDUCTION and V pattern



MONOCULAR MAXIMUM SURGERY FOR XT

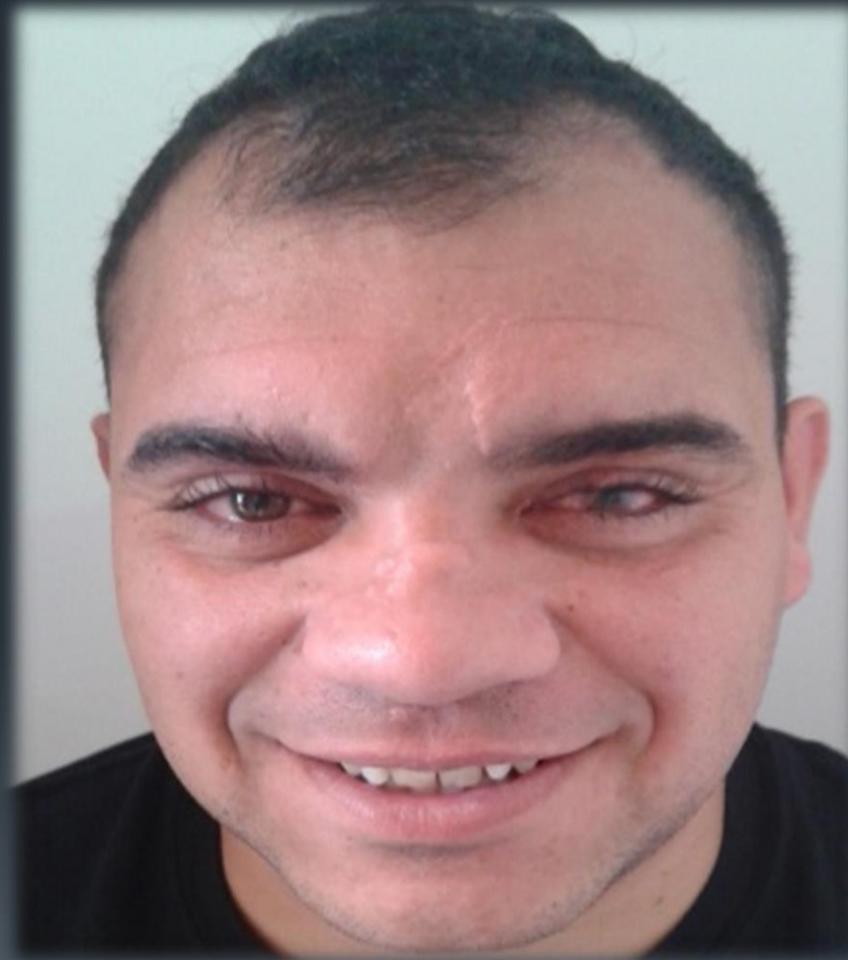
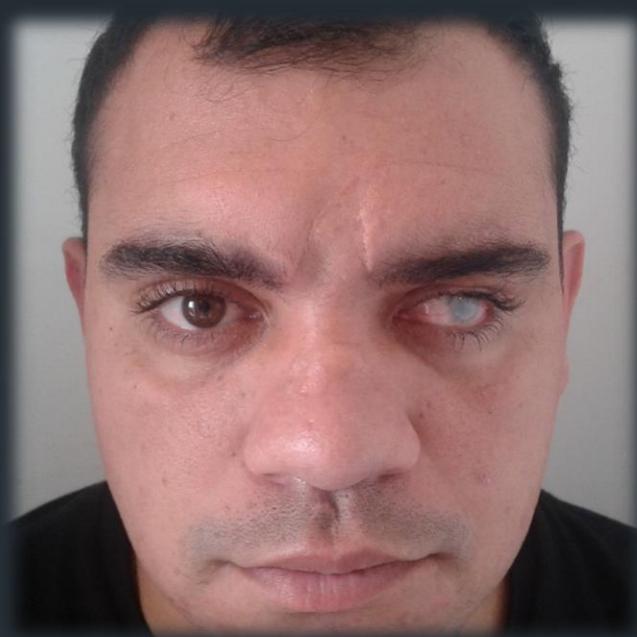
WALTER – 26 YEARS

Post – operative: 6 months



MONOCULAR MAXIMUM SURGERY FOR XT

WALTER – 26 YEARS



✓ **Social
and
Labor
insertion**

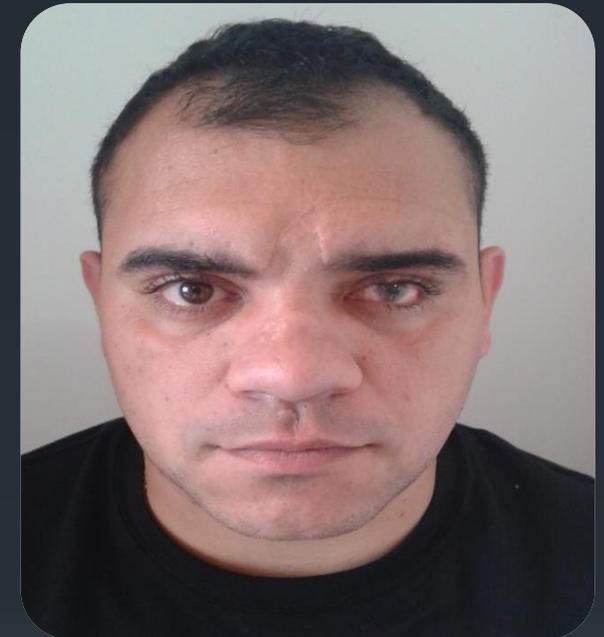


MONOCULAR MAXIMUM SURGERY FOR XT

WALTER – 26 YEARS

POST – OPERATIVE : 2 YEARS (2017 October)

* XT 5 / XT 10 PD



Conclusion



Red Eye
Pain

+

Sensorial
Exotropia

+

Leucoma
Ptisis



Queratectomy
+ Amniotic
Membrane



Monocular
surgery for
strabismus



Tattooing of
the Cornea

HAPPY patient



Conclusions



- In cases of blind eye Maximum monocular surgery has good results
- The integral symptomatology and aesthetic treatment of a patient with strabismus and leucoma improves labour and social inclusion as well as self-esteem and life standards.



Questions :

1- Would you perform surgery on phthisis bulbi eyes?

- a) Yes**
- b) No**

2- What technique would you choose to strengthen the muscle?

- a) Muscle plication**
- b) Muscle Resections**

3- In patients with deep amblyopia of an eye or blind eye you prefer to perform

- a) Monocular surgery**
- b) Bilateral surgery**



Could our Experts please answer these Questions?

- **In case of blind eye which is most frequently chosen: binocular or monocular surgery? Why?**
- **What parameters would you consider when performing strabismus surgery on eyes with phthisis bulbi?**
- **Have you had any problems with a patient while operating the healthy eye in addition to the blind?**
- **What would be the maximum surgery to perform both recession and resection or muscle plication in case of unilateral surgeries?**



Thank you !!

