

Specialists in managing
Congenital
Anophthalmia & Microphthalmia

Definition

From the Greek:

An: Absence + Ophthalmos: Eye = Absence of the eye.

mikros = small ophthalmos = eye

CONGENITAL ANOPHTHALMIA

Absence of one or both eyes

Anophthalmia has been estimated at 0.2-0.3 per 10.000
Births.

bony orbital hypoplasia

Microblepharon and facial asymmetry due to hemi facial microsomia.

Close interaction between ophthalmologist and ocularist.

Congenital MICROPHTHALMIA

- This eye abnormality arises before birth one or both eyeballs appear to be small.
- Children with congenital microphthalmia may also have other eye abnormalities
- Microphthalmia occurs 1 in 10.000 births.

MANAGING A UNILATERAL CASE OF CONGENITAL ANOPHTHALMIA (EARLY INTERVENTION)

MALE ,BORN 9 JUNE 2015

DIAGNOSIS RIGHT CONGENITAL ANOPHTHALMIA

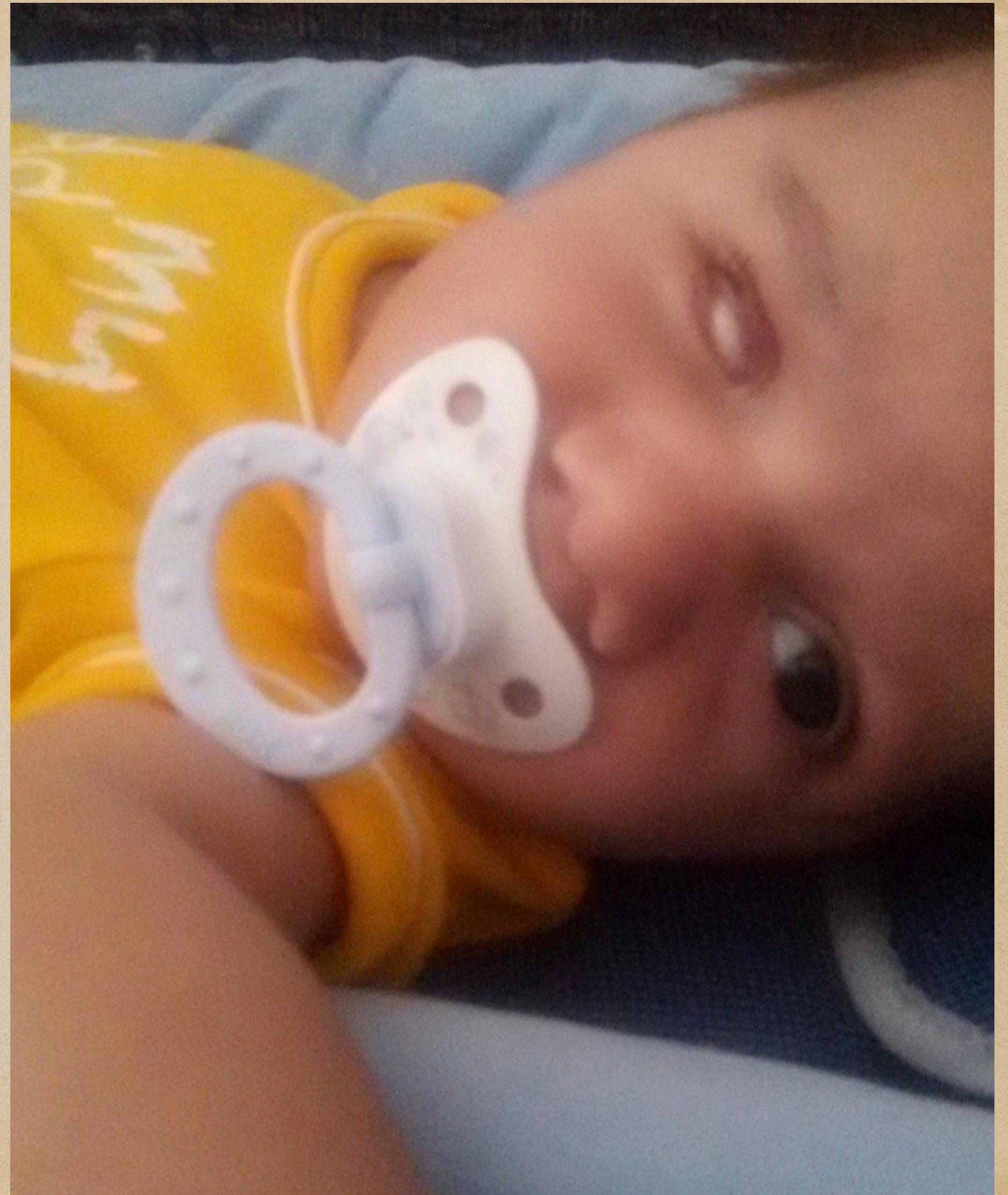
note that the volume of the eye is not similar and
asymmetry of eyebrows is present.



Step 1 : fitted with hydrophylic
expander.duration 3 days



Step 2: fitted with socket retainer
duration 20 days

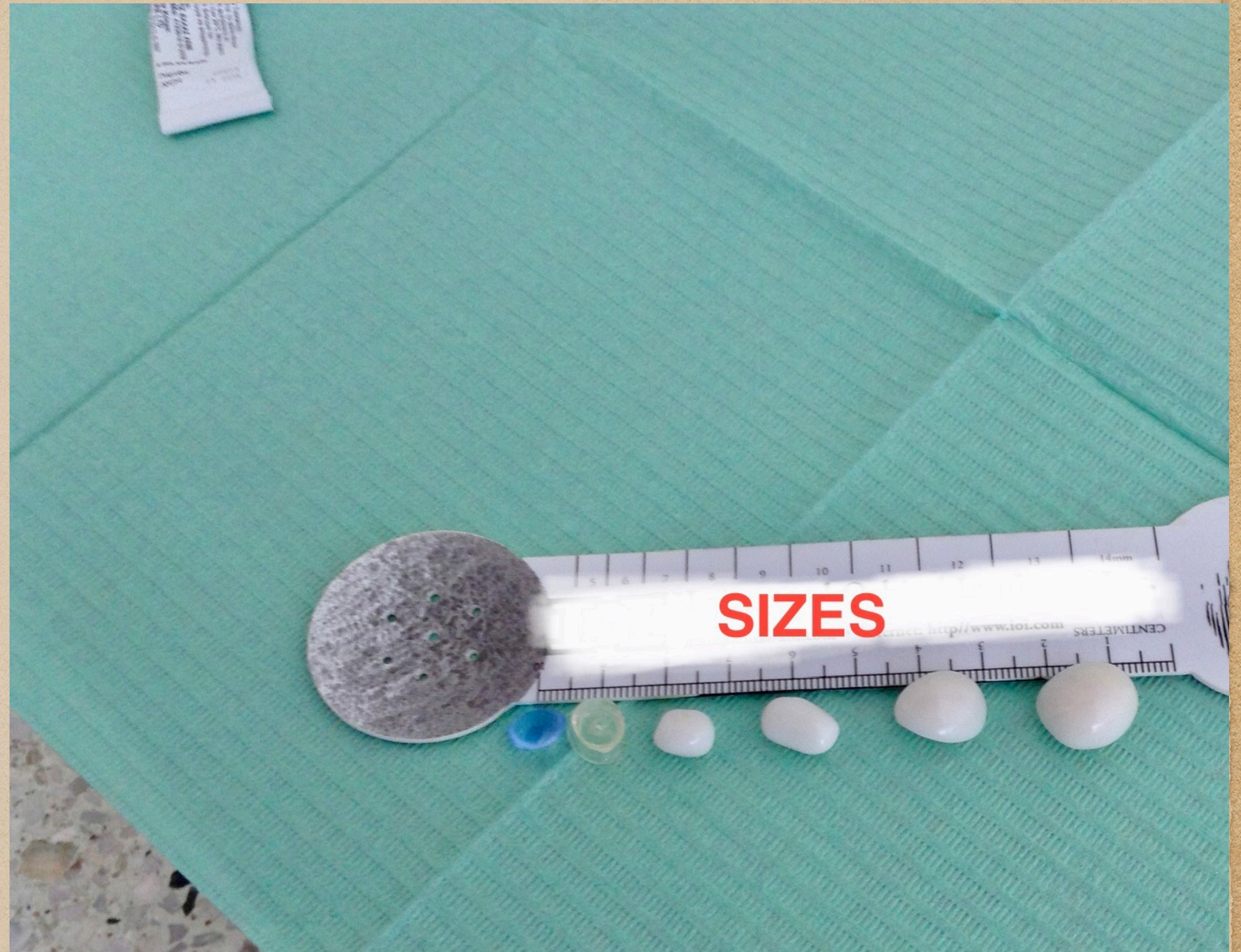


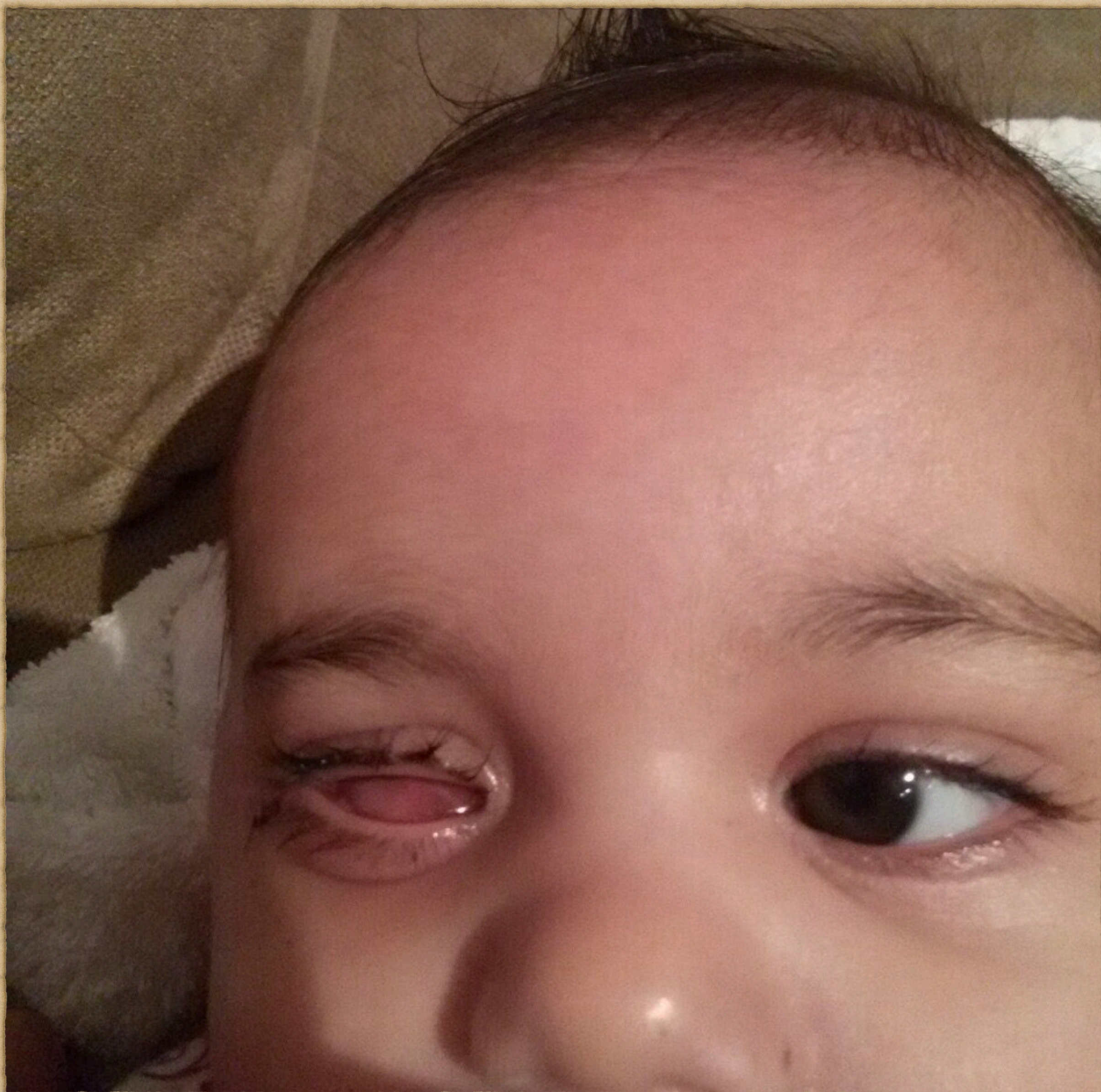
Topical anaesthetic eye drops are applied while examining the socket determining its depth and shape,

-

A socket expander whether solid or hydrogel of an appropriate size and shape is inserted and the eyelids are allowed to close gently.

Step 3 replaced by a larger socket
retainer duration 20 DAYS





Step 4 impression of the socket
taken





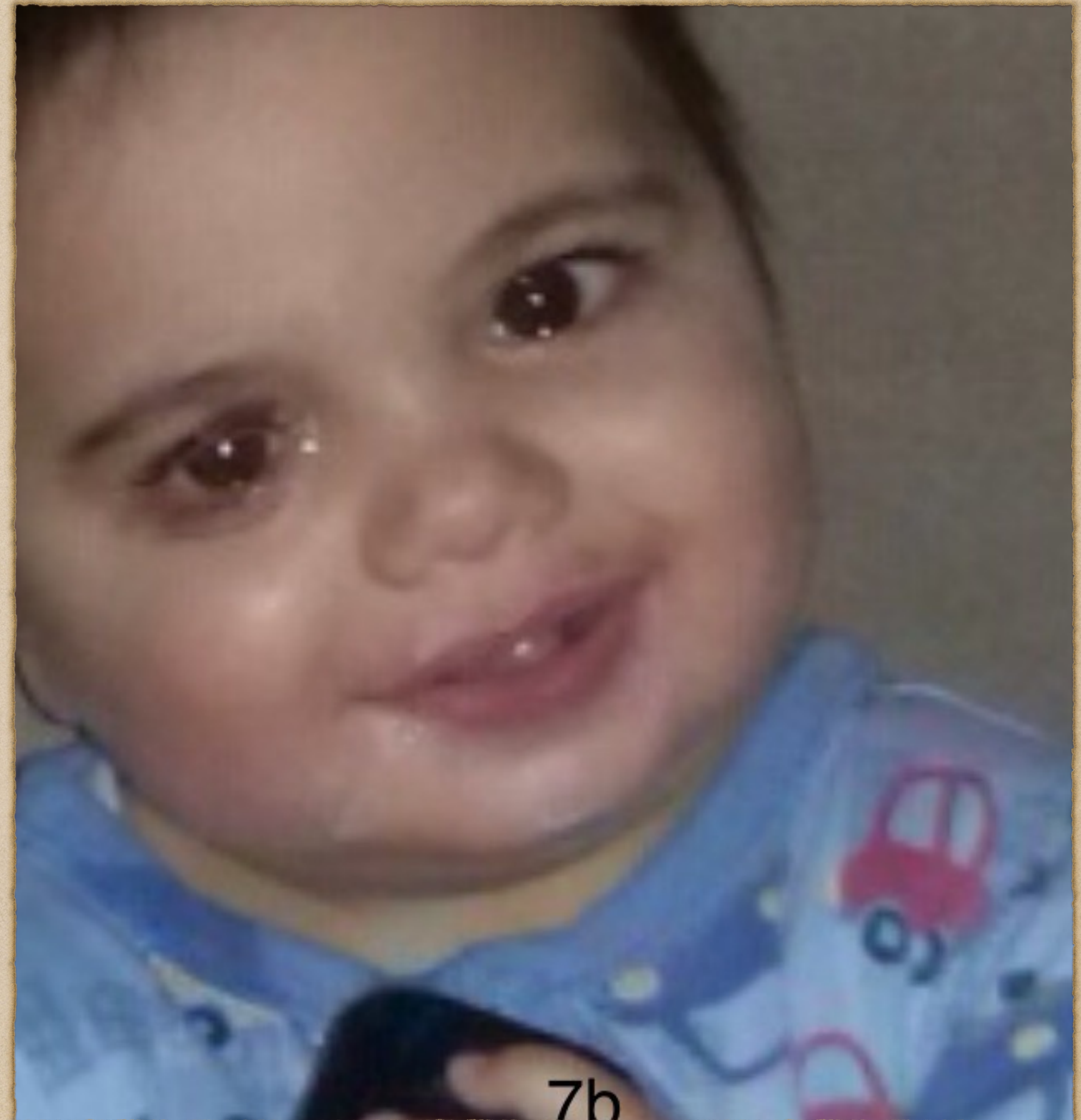


FIRST PROSTHESIS



GROWING with a larger prosthesis

Note eyebrows starting to look
normal



At the age of 2 years, the mean horizontal eyelid length and the volume
Increase .

no serious complications were encountered throughout the follow-up period that ranged from 1 month to 8 years .

3
YEARS OF AGE



4
YEARS OLD



5
YEARS OLD



8
YEARS OLD





DO'S AND DONT'S

Don't design the socket for the device

Do design the device for the socket

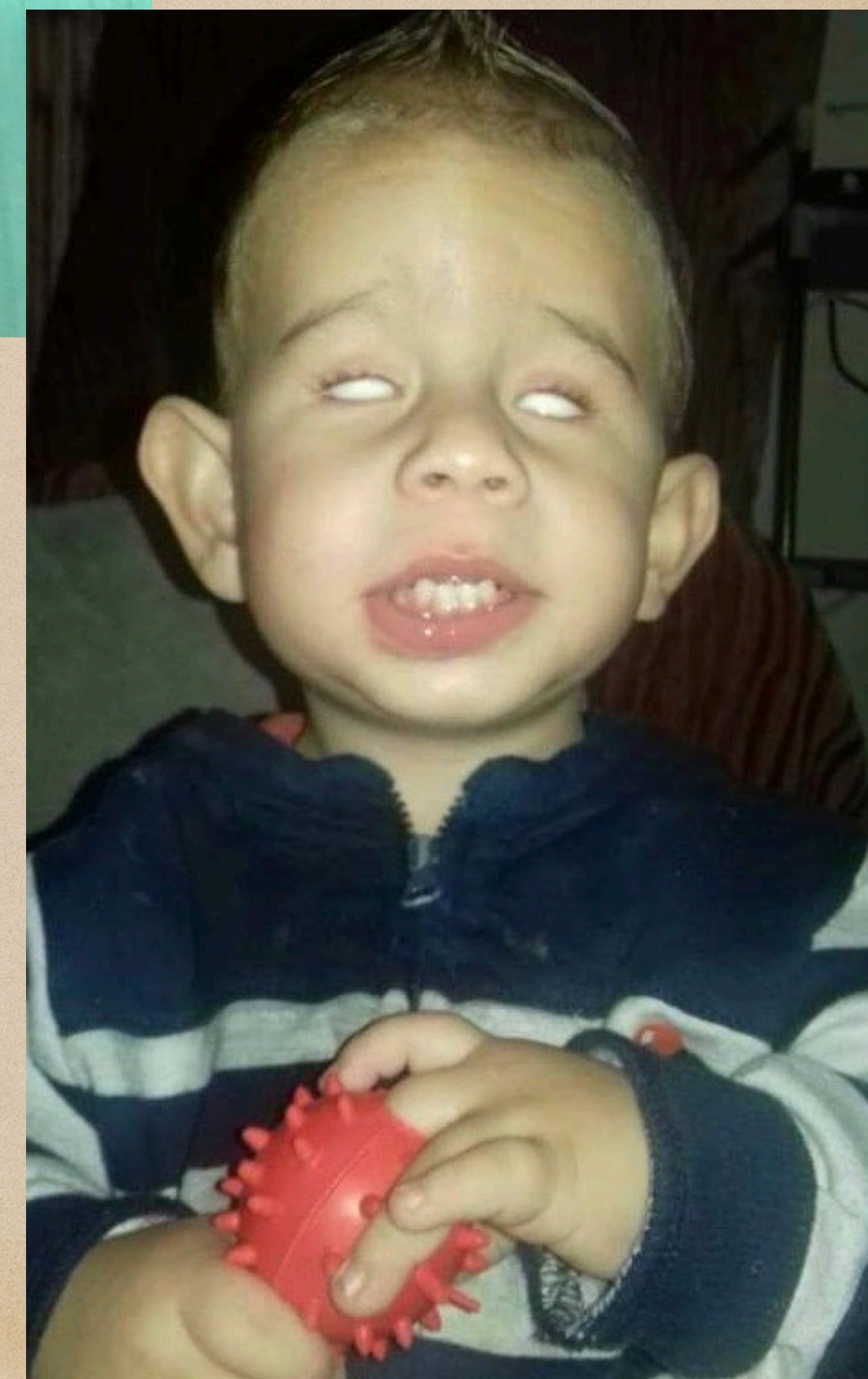
MANAGING A BILATERAL CASE (EARLY INTERVENTION)

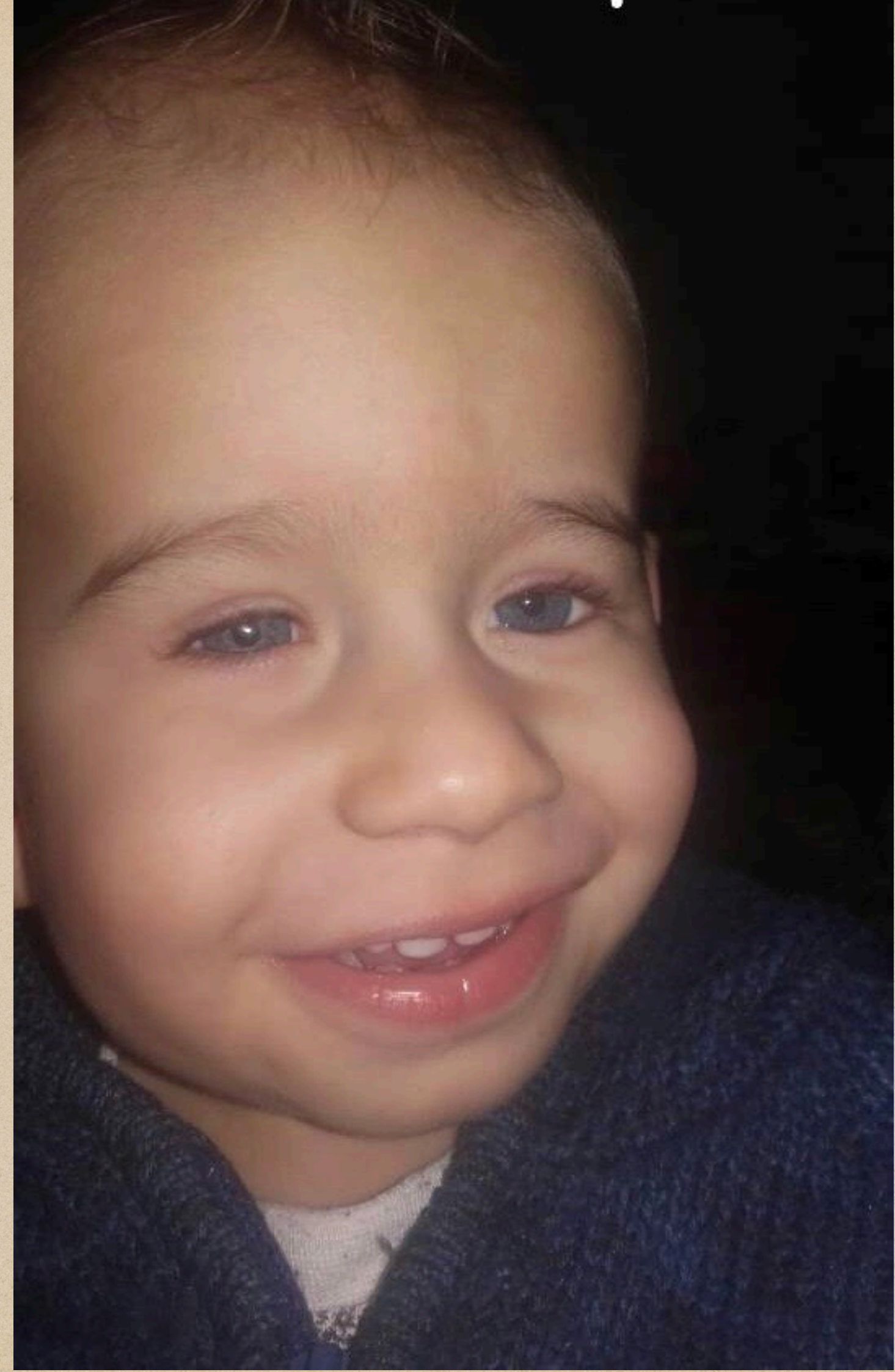
Date of birth June 2019





Gradual enlargement with expanders





MANAGING A BILATERAL CASE OF CONGENITAL ANOPHTHALMIA
(LATE INTERVENTION)

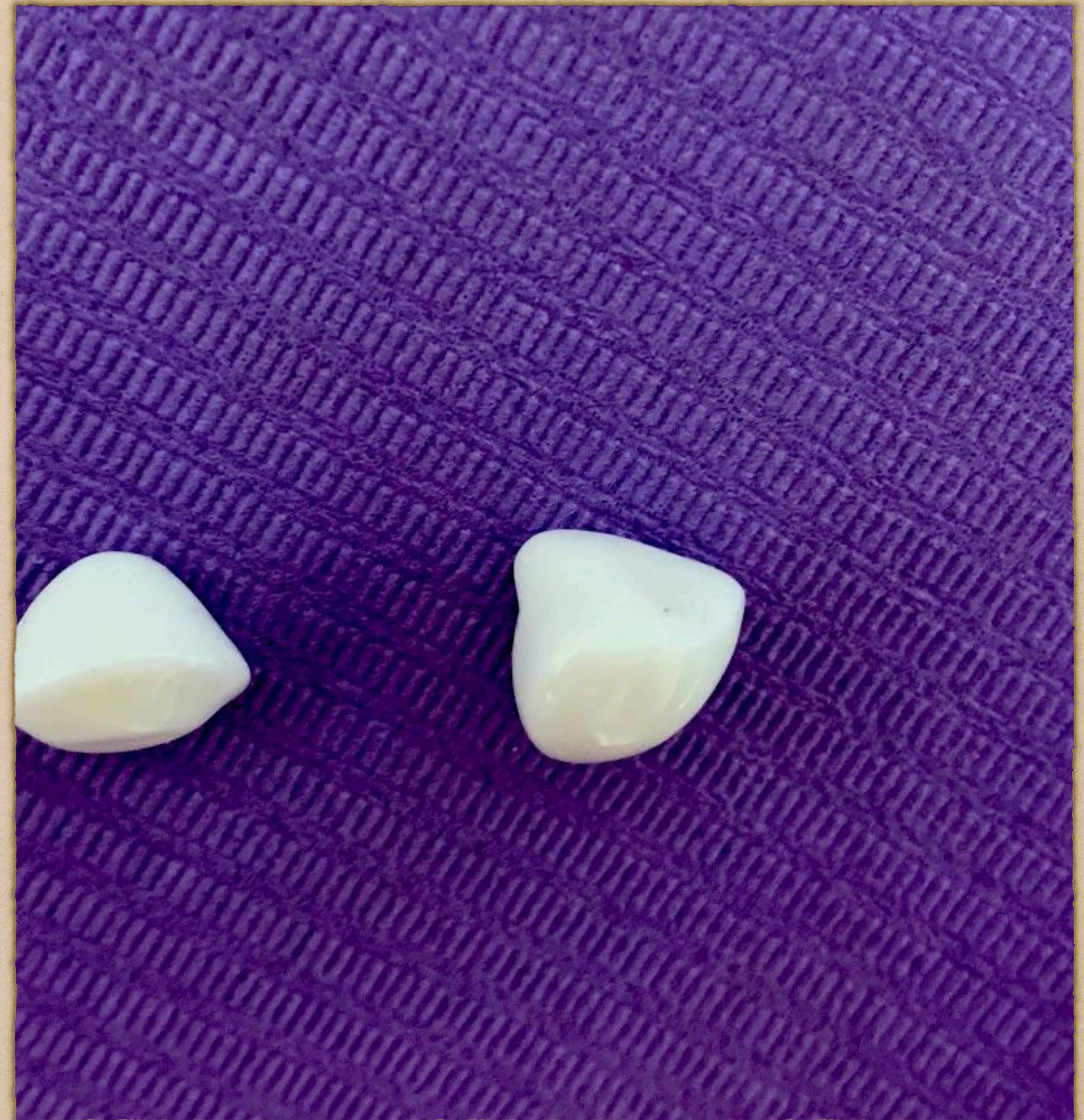
DATE OF BIRTH JANUARY 2015

Child was brought for treatment in 2018 at the age of 4.

In this case an impression of the sockets was taken.

Cone shapes.

In late intervention there are hardly any fornices
this makes it very difficult To hold the retainers in
place ,thus the cone shaped expanders are very
helpful.



VERY SHALLOW FORNICES



Note as soon as the expanders were placed the change and improvement of the eyebrows is very clear.



Fornices starting to develop.



Child wearing his prosthesis



EARLY INTERVENTION VS LATE INTERVENTION



Tiny orbit & Tiny socket Horizontally and vertically

START EARLY

The growth of the affected orbit slows down by 3 years of age. Therefore, intervention therapy before 3 years of age is critical.

The purpose is to gain soft tissue socket expansion in young children with simple methods in an examination room as to avoid hospitalisation and general anaesthetic.

NEGLECTED CASES







Early active conservative treatment"

Without intervention, the socket and lids remain underdeveloped and the ability
to
wear
a prosthesis in later life is compromised

***Neglected cases
could lead to
abnormal growth
of both bone and
eyelid.***



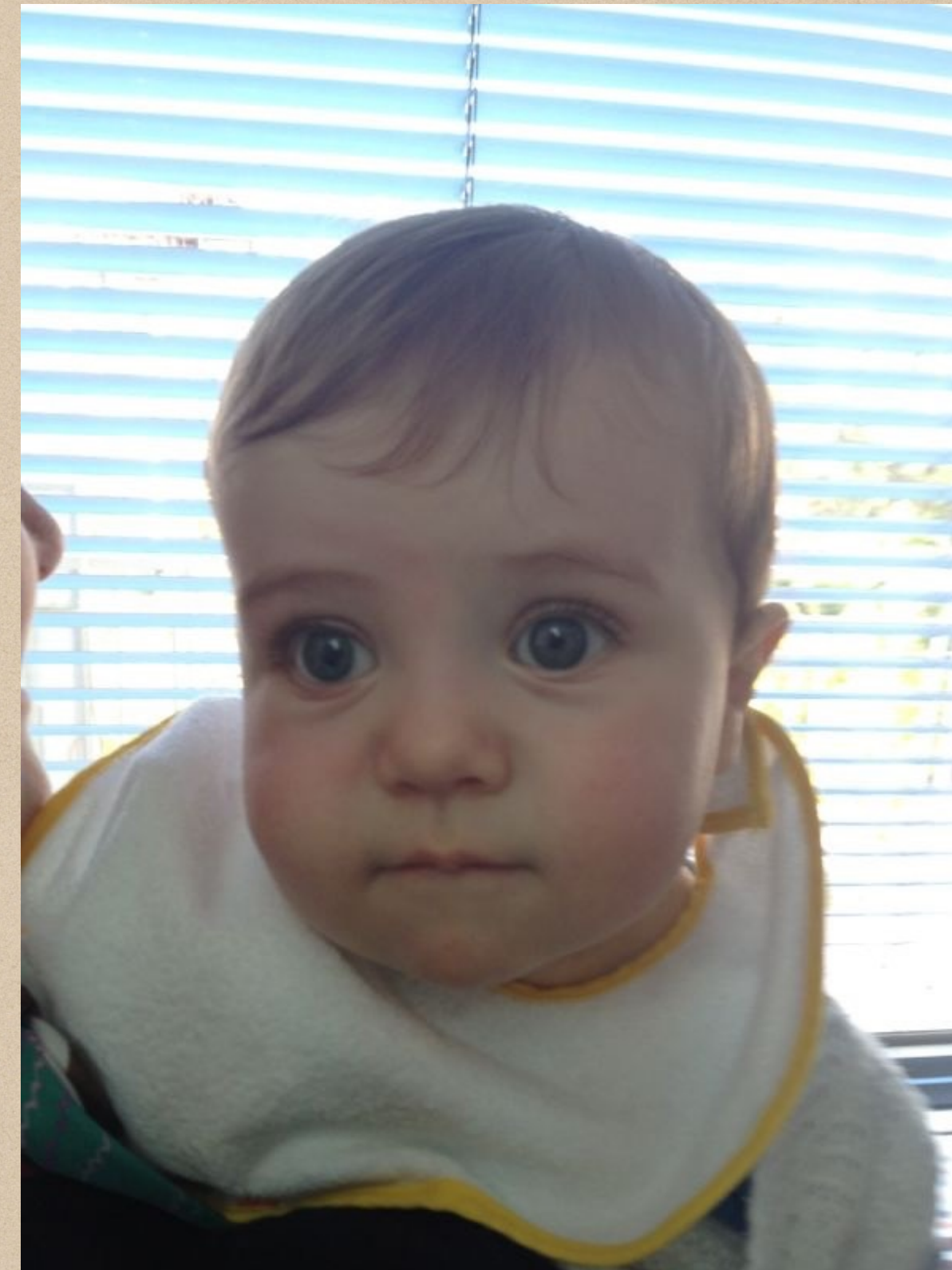
***Follow-up could prevent
massive contraction of
sockets and orbits.***

In unilateral cases, the asymmetry becomes more pronounced as the child grows.

The cosmetic deformity that can ensue without intervention can lead to marked difficulties with social interaction.



With appropriate treatment the cosmetic outcome is greatly improved .



A prosthesis is **NOT** a cosmetic device its a functional appliance it supports the tissues and in some ways acts like a splint keeps tissues under tension -preserves elasticity.

Microphthalmia,

Where the microphthalmic eye has an axial length of less than 16 mm

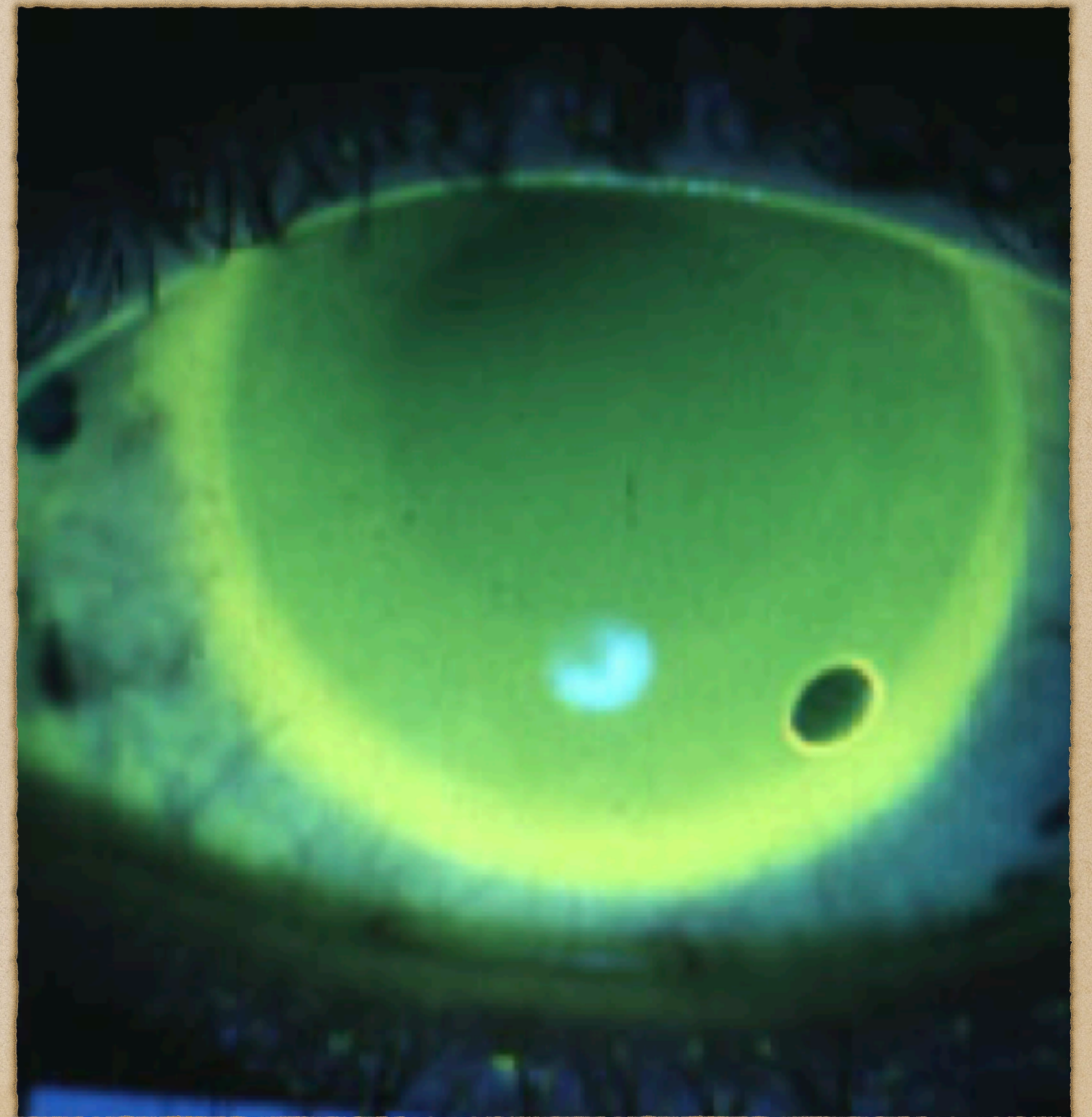
(Collin, unpublished observation), it is unlikely to promote normal orbital growth alone and it is therefore necessary to increase the socket volume early on to prevent asymmetry becoming more pronounced

as the child grows. In this situation, a custom-made cosmetic shell can be fitted over the microphthalmic eye or ocular remnant to promote orbital growth.

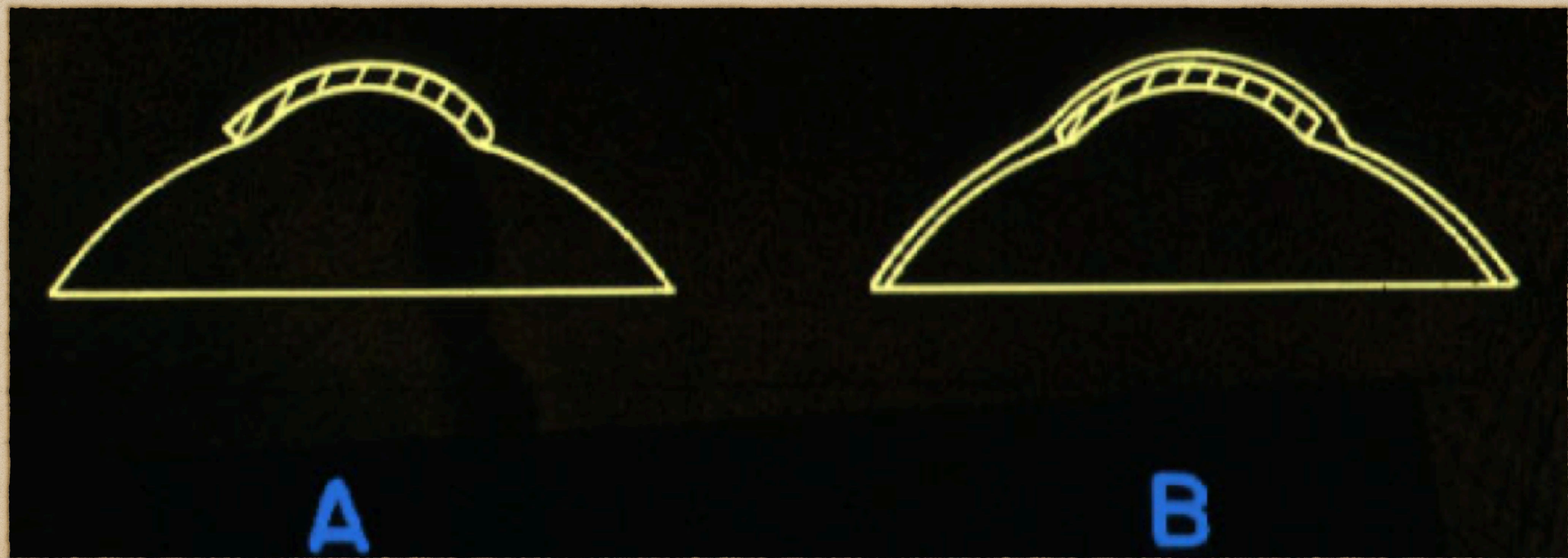


Fluorescein strips are used to allow tear flow around microphthalmic cornea
tolerance of shell.

Need clearance over whole
cornea and limbus.



Final lens must have clearance over the cornea and limbus.
If the scleral cosmetic lens rests on cornea or limbus it will be uncomfortable.







Some centres will remove a non-seeing eye, and use a dermis fat graft/ball implant at an early stage.

Our preference, however, is to preserve the microphthalmic eye even if there is no visual potential.

The advantages of this approach are that the microphthalmic eye is likely to provide some stimulus to palpebral aperture and socket growth,

Especially where the microphthalmia is only mild or where there is an associated orbital cyst and it avoids the need for early invasive surgery with all its accompanying risks.

Clear moulded shapes could be fitted in front

of the

Microphthalmic eyes

Child with clear moulded shape and finally with prosthesis.

