INSUFFICIENT CONJUNCTIVAL CAVITY.
CONSERVATIVE AND SURGICAL TREATMENT

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Insufficient conjunctival cavity - what should we do in this case?

Each of us faced with this problem and had a choice: who is responsible for it? Surgeon? Ocularist? Patient? How can we help?

Ocularist thinks: I can send a patient to surgeon. He should do the plastic with transplantation of mucous and formation of fornixes... and then I’ll do the prosthesis. Surgeon thinks the same.
Before surgery

After the series of reconstruction surgeries

Excessive scarring deforms the area for surgery

But often after the surgery we get a result worse than in was before. The patient suffers in each case. And he doesn’t know what to do. In the begging of our practice we’ve got a negative experience after these procedures.
We analyzed the literature. All authors have the same points.

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Enucleation after severe injury with conjunctiva loss</td>
<td>Orbital implant migration to the area of posterior fornix</td>
</tr>
<tr>
<td>Wrong steps of surgical technique at enucleation</td>
<td>Surgical revision of cavity after implant rejection</td>
</tr>
<tr>
<td>Burns (thermal, chemical, radiation)</td>
<td>Chronic conjunctivitis</td>
</tr>
<tr>
<td>Long-term usage of worn-out prostheses</td>
<td>Poor hygiene of cavity</td>
</tr>
<tr>
<td>Late postoperative prosthesis</td>
<td>Usage of chipped or rough prostheses</td>
</tr>
<tr>
<td></td>
<td>Wearing prostheses unsuitable for cavity</td>
</tr>
</tbody>
</table>
The main reasons of insufficient conjunctival cavity are:

1. Congenital anophthalmia or microphthalmia
2. Severe trauma and burns
3. Non correct surgical technique in case of removal of the eye
4. Exposure and rejection of the implant
5. Breaking the rules of using of the ocular prosthesis
6. Late primary post-operative prosthetics
7. Chronical conjunctivitis as a result of using old, damaged or unsuitable prosthesis
CONGENITAL ANOPHTHALMIA

Result of 10 plastic surgeries was a cavity scarring

In the begging of my practice I’ve faced with a negative result of surgical treatment and bad prosthetic in case of congenital anophthalmia. This girl came to us at age 12, the socket was formed with skin and because of this reduction we could use a very small and thick prosthesis without iris.
CONGENITAL ANOPHTHALMIA

Face asymmetry due to inopportune and inadequate prosthesis

This is 8 year old boy. We worked hard to expand the cavity with compound form prosthesis.

8 years old

11 years old
CONGENITAL ANOPHTHALMIA

14 prosthesis

But, unfortunately, we also get unsuccessful result

13 years old
MECHANICAL EXPANDING OF CAVITY

Fenestrated prostheses
Sverdlov D.G., Tchastniy F.E., 1954

Expander prosthesis and olives
Filatova I.A., 2007

Csapody expander

Hydrophilic tissue expander
Guthoff R.F., 2006

With our own experience and analysis of experience of our colleagues from different countries
we begin to produce a set of prosthesis for expanding of the socket with different pathologies
For example in case of congenital anophtalmia we start to use this ready-made set and individual prosthesis till age 5 or 6 years, and when the cavity is stretched enough but we still have a tendency for entropy of lids and lashes we can perform a surgical correction of the socket.
After that the lids have a normal position, the cavity become more suitable for the prosthesis and we can use a smaller size.
We found out that form and size of the prosthesis in cases of congenital anophthalmia should be chosen considering the national face type with its’ anatomical structure specific, and the size of healthy Eye. For example for patient with Asian type we can have epicanthus it is normality, but it is abnormality for the European type.
In cases of congenital microphthalmia we get a good results after a conservative expanding of the socket.
SURGICAL TREATMENT

Formation of functional stump in 10 years after retinoblastoma removal

In cases of retinoblastoma we can perform a plasty from age 14-15 years old.
After enucleation due to a phacomatosis node within the right orbit

Sometimes conservative tactic was enough for a good cosmetic result. When there was no possibility to expand the socket with conservative tactic we performed a plasty with using of mucous and auto derma as a first step.
After teratoid tumor removal within the right orbit

This is a 8 years old girl. She had 3 operations because of teratoid tumor
SURGICAL TREATMENT

Formation of functional stump after traumatic eye removal and severe burn

This 12 years old boy had 6 operations after traumatic eye removal and severe burn. We performed the plastic of lids, socket and eye lashes transplantation.
CAVITY REDUCTION

Using of fenestrated prostheses form in cases of orbital implant exposure allow us to save the size of cavity big enough for the prosthetics.
After a long-term usage of a worn-out prosthesis, 80% CAVITY REDUCTION was achieved. In adults, the result was based on the discipline and patience of the patients. In 80% of cases, we get a good result with conservative expanding tactic.
Delayed stump implantation with a combination of blepharoplasty and entropion repair

In 15% we performed surgery using different materials.
In 5% cases we used both methods: conservative and surgical.
Bilateral anophthalmia and traumatic ankyloblepharon
Conservative treatment – 102 patients (77.6%)
Surgical treatment – 26 patients (22.4%)
• Reduction of conjunctival cavity was observed in 10% of patients with anophthalmia.
• ONLY conservative cavity expanding - 79.6%.
• Surgical reconstruction of the cavity for an artificial eye is one of the most complex part of ophthalmomplasty. Results are not always predictable.
• Reoperation is necessary in 29.6% of cases.
THANKS FOR YOUR ATTENTION!

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