



جامعة المستقبل
AL MUSTAQBAL UNIVERSITY

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Department of Optical Technologies

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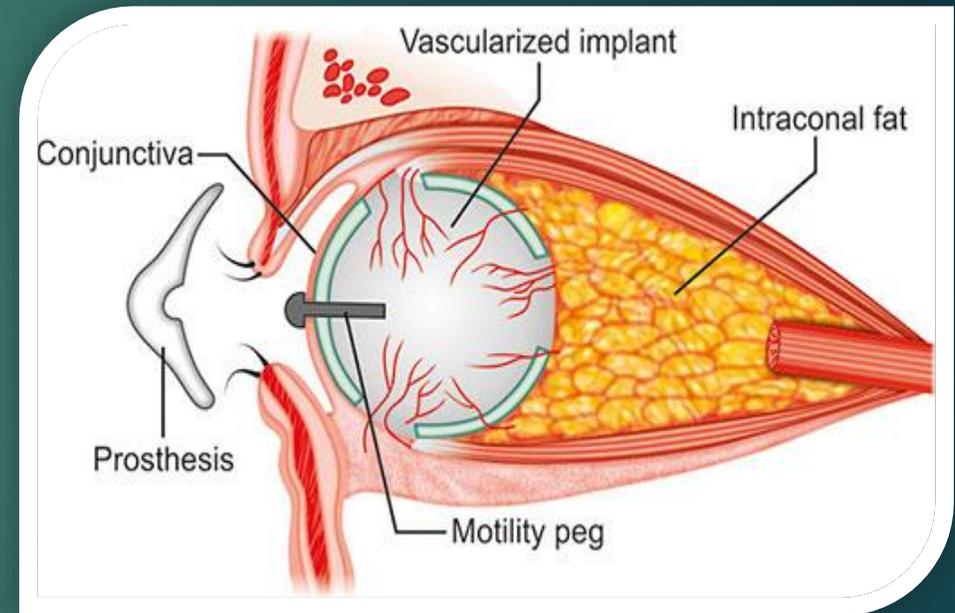
Subjective
Prosthesis eye

Lecture three : Anatomy of the face

Orbital implant

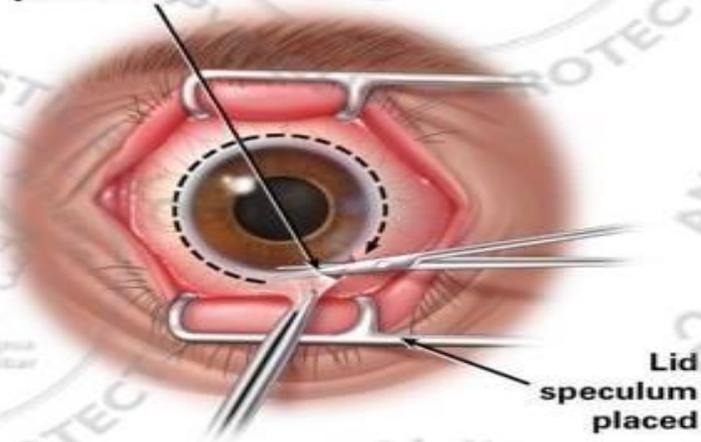
- When an eye is removed, an orbital implant is used to replace the area in the orbit.
- Orbital implants are medical prosthetics used to replace the volume and allow some amount of realistic movement of a prosthetic eye following eye removal.
- different types of implants, classification ranging from shape (Spherical vs egg (oval) shaped), porous vs nonporous and the presence of a peg.
- can be to divide implant types into two main groups: nonintegrated (non-porous) and integrated (porous).

Ocular prosthesis and orbital implant



Orbital implant

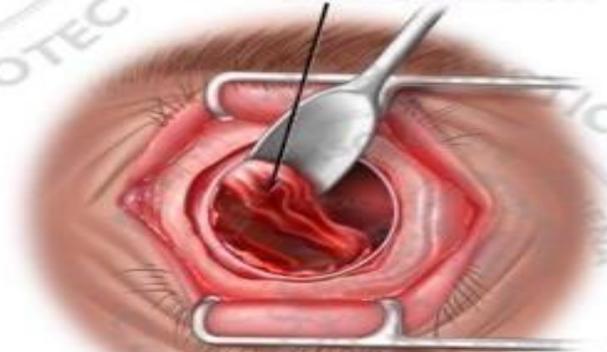
Step 1: 360° peritomy performed



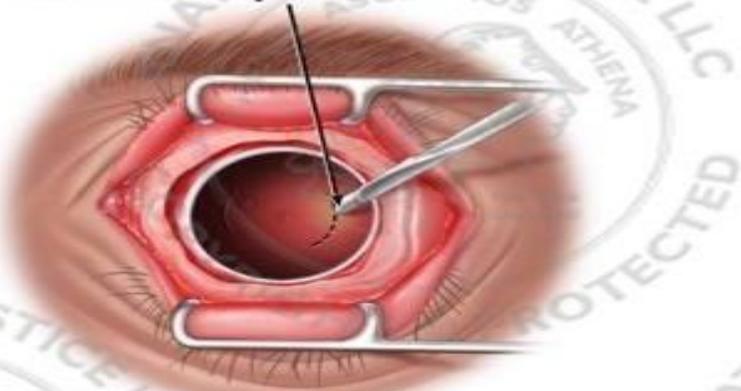
Step 2: Removal of the cornea



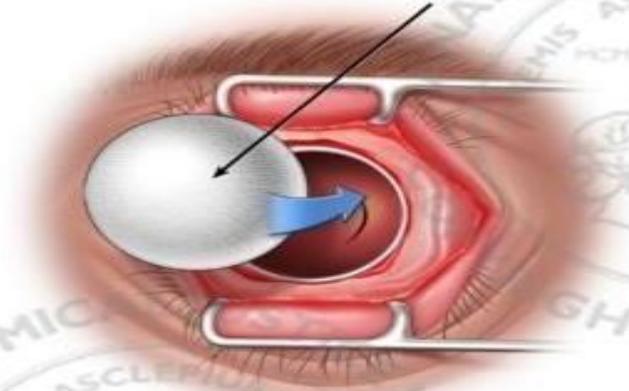
Step 3: Removal of ocular contents



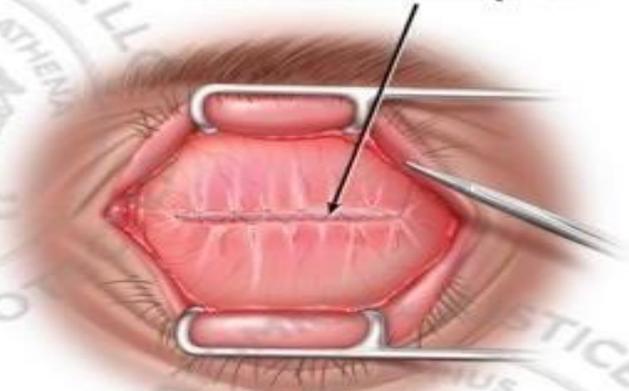
Step 4: Incisions made in sclera for implant



Step 5: Orbital implant inserted

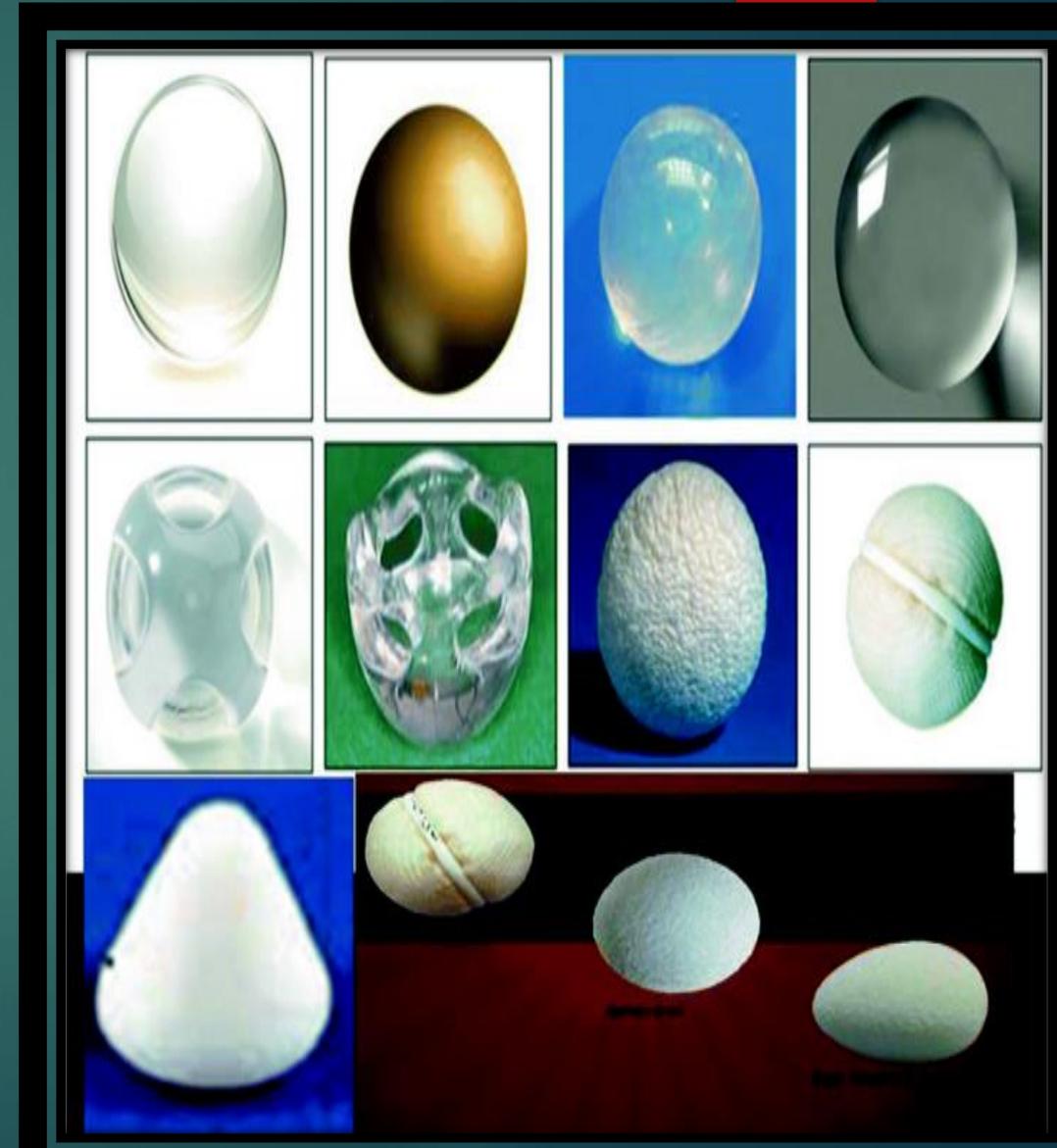


Step 6: Sclera and conjunctiva sutured over implant



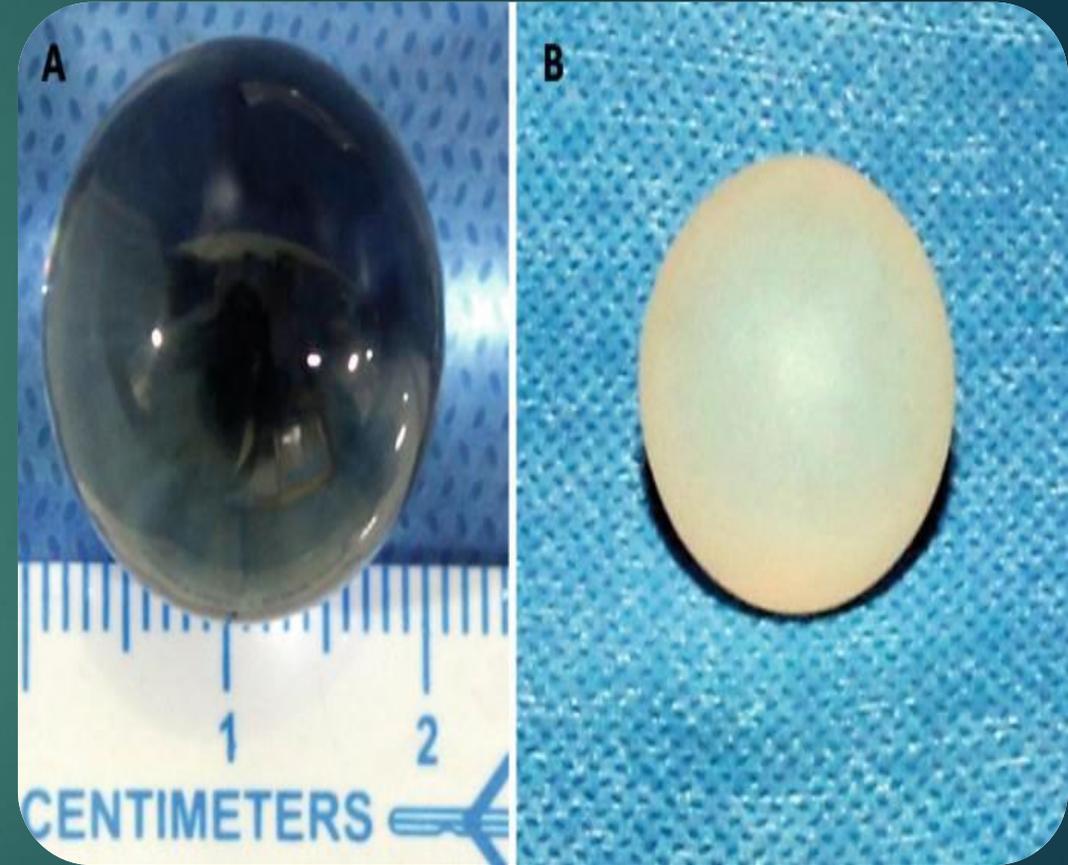
Integrated orbital implant

- these implants are made of porous material, meaning tissues can grow into the implant. Examples are hydroxy-apatite, polyethylene and Aluminium oxide.
- Integrated of fibrovascular tissue into the porous structure of implant
- Advantages: excellent mobility; stays in the same position; rarely migrates; can be pegged.
- Disadvantages: risk of infection is higher than non integrated; expensive.



Non integrated orbital implant

- these implants are made of non porous material, meaning tissues cannot grow into the implant. Examples are acrylic, glass and rubber.
- No unique apparatus for attachment to the extra ocular muscle
- dvantages: Inexpensive; very low risk of exposure.
- Disadvantages: Less movement; can migrate within the orbit.



Pegged implants

- a peg can be connected to the implant after enucleation, to improve mobility of the artificial eye. A small hole is drilled into the implant and a peg inserted. The artificial eye then connects to the peg, creating more natural movement via the tiny ball and socket joint.



Advantage of orbital implant

- To replace the area in the orbit
- To provide support for the artificial eye
- To reproduce the motility of artificial eye

Material used for orbital implant

- silicone,
- hydroxyapatite,
- porous polyethylene.
- Glass
- Rubber
- acrylic

Artificial eye (Ocular prosthesis)

- is a prosthesis replaces an absent natural eye.

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Advantage of ocular prosthesis

- To maintain the volume of eye socket.
- To give such individuals professional and social acceptance.
- To restore the appearance for the patient

Types of ocular prosthesis

1. Stock ocular prosthesis is a readymade prosthesis that come in standard sizes, shapes and colors.

Advantages

- inexpensive
- can be delivered quickly.

Disadvantages:-

- Poor fit
- Used for interim purpose only.



Types of ocular prosthesis

2. Custom made ocular prosthesis

is a hand made preosthesis used to replace the missing eye and fit the eye socket. It is made from acrylic resin.



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