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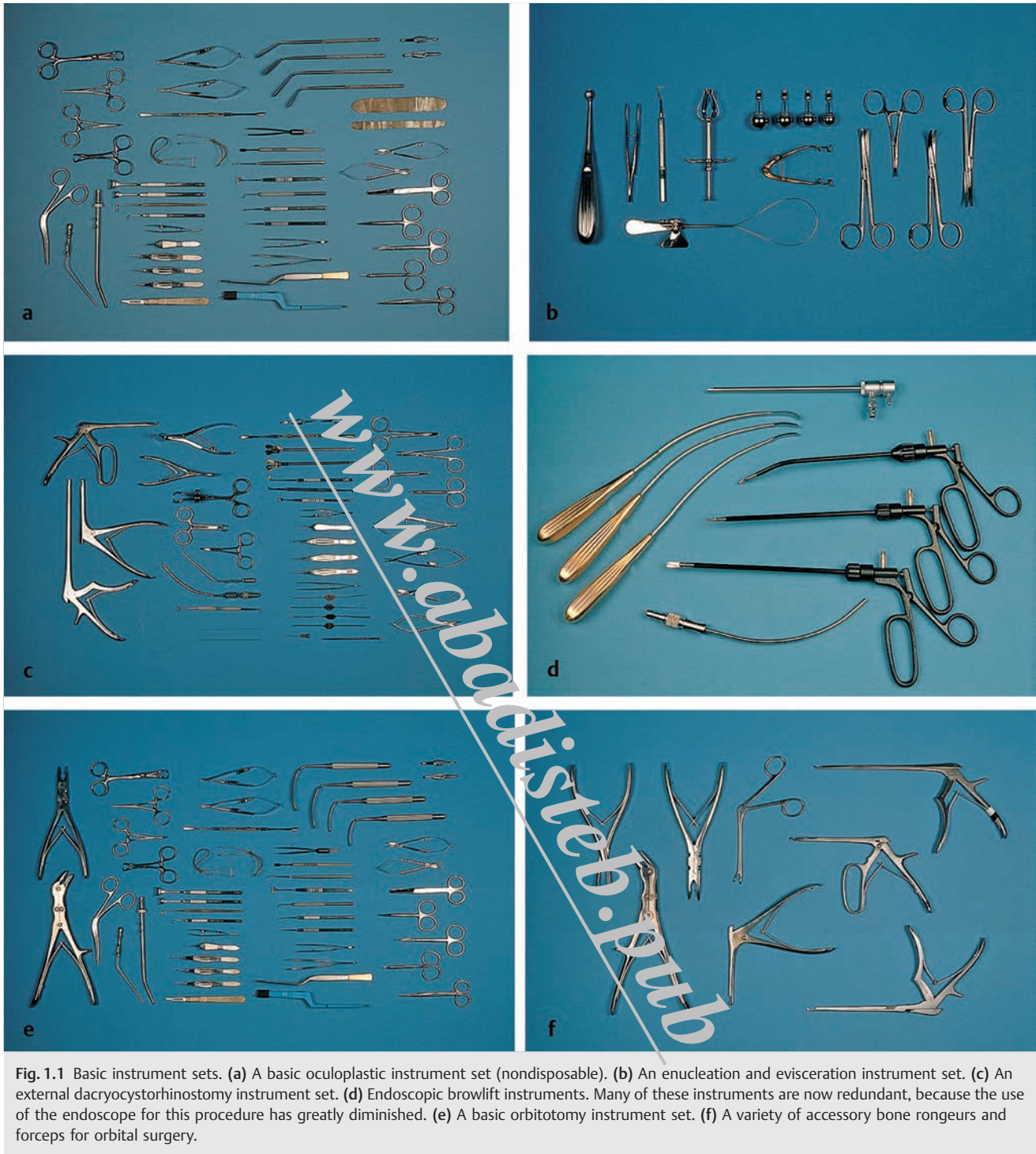


Fig. 1.1 Basic instrument sets. (a) A basic oculoplastic instrument set (nondisposable). (b) An enucleation and evisceration instrument set. (c) An external dacryocystorhinostomy instrument set. (d) Endoscopic browlift instruments. Many of these instruments are now redundant, because the use of the endoscope for this procedure has greatly diminished. (e) A basic orbitotomy instrument set. (f) A variety of accessory bone rongeurs and forceps for orbital surgery.

both cutting and monopolar coagulation modes. It is used in conjunction with a Valleylab diathermy machine (► Fig. 1.2). I use this instrument ubiquitously in my practice for making skin crease incisions, subciliary incisions, and transconjunctival incisions in addition to general eyelid dissections (e.g., to perform blepharoplasties or to expose the levator aponeurosis and the inferior orbital margin). Alternatively, it can be used for soft tissue dissection in the eyelids after making the initial skin incision with a No. 15 Bard Parker blade. Its use requires a dry surgical field. The tissues to be dissected should be held under some tension.

The tip of the needle should be moved constantly across the tissue to be dissected when the instrument is activated to avoid burning the tissues and should be used with a delicate stroking motion without applying pressure to the tissues.

Artery clips are used routinely to fix traction sutures and Jaffe retractor bands to the surgical drapes. Curved clips that lie flat against the surface of the drapes are preferable to straight clips. To fix the suture or bands, one limb of the clips should lie beneath a fold of the drapes before the clips are closed.



Fig. 1.2 A Valleylab diathermy machine.

Enucleation scissors in a variety of curvatures and sizes should be available and used whenever the use of a snare is inappropriate, such as where a long piece of optic nerve is required, in the presence of a soft globe, a previous corneal section, or a penetrating keratoplasty. A snare may transect the posterior aspect of a soft globe and can cause a globe weakened by previous surgery to rupture, causing intraocular fluid to spray out under pressure. A snare is otherwise very useful for enucleation surgery, and its use is associated with minimal bleeding (► Fig. 1.3).

Spring-handle needle holders are available in a variety of sizes and may be curved or straight. These are excellent for use in oculoplastic surgery. These are selected according to the size of needle to be used. Needle holders designed to hold small needles, such as a 7-0 Vicryl suture needle, will be damaged if used inappropriately to hold larger needles. The Castroviejo needle holders are preferred, because they have a simple locking mechanism that permits the needle to be loaded securely and held between suture passes. Ring-handle needle holders (e.g., the Webster needle holder) are used to hold suture needles larger than 4-0.

A variety of bone punches are available for bone removal, such as for an external DCR (► Fig. 1.1f). It is important that these are used appropriately. The delicate bone of the lacrimal fossa floor can be removed using a fine punch, such as a Hardy sella punch.

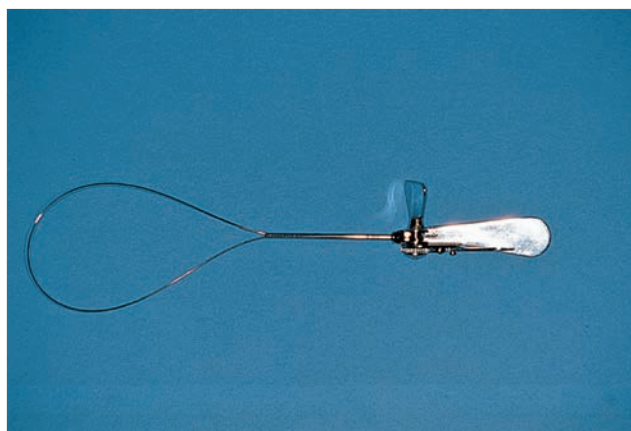


Fig. 1.3 An enucleation snare.

This should then be replaced by progressively larger Kerrison rongeurs for the removal of the anterior lacrimal crest and nasal bone. The continued use of the delicate Hardy sella punch for the thicker bone will result in damage to this instrument.

1.8 Correct Surgical Site Marking and Allergy Check

It is the responsibility of the surgeon to ensure that he or she has seen the patient before surgery and has clearly marked the correct surgical site after carefully checking the patient's consent form and the patient's identification bracelet. As mentioned previously, when the patient arrives in the anesthetic room, the surgeon should pause. This pause before anesthesia and surgery, or time out, forces everyone to slow down for a few moments and double check what they are about to do.

The surgeon should follow the hospital's agreed protocol to ensure that the correct patient has arrived; that every member of the surgical team agrees that the correct operation is to be performed on the correct side; that the appropriate scans are available; and that all required surgical equipment, implants, and disposables are available. In addition, where appropriate, the availability of cross-matched blood should be checked and the availability of a pathologist confirmed whenever a frozen section is required. A checklist should be completed and signed.

The surgeon should check the patient's allergy history before giving any injections and before prepping the patient. The surgeon should also inform the anesthetist before the administration of any injections. The surgeon should always prep and drape the patient himself or herself and should not allow himself or herself to be distracted during this very important process.

The surgeon should also ensure that all members of the surgical team are wearing eye protection prior to the commencement of surgery and that suction is available for the evacuation of surgical smoke.

Key Point

The surgeon should ensure that "time out" is called before the commencement of anesthesia and surgery.

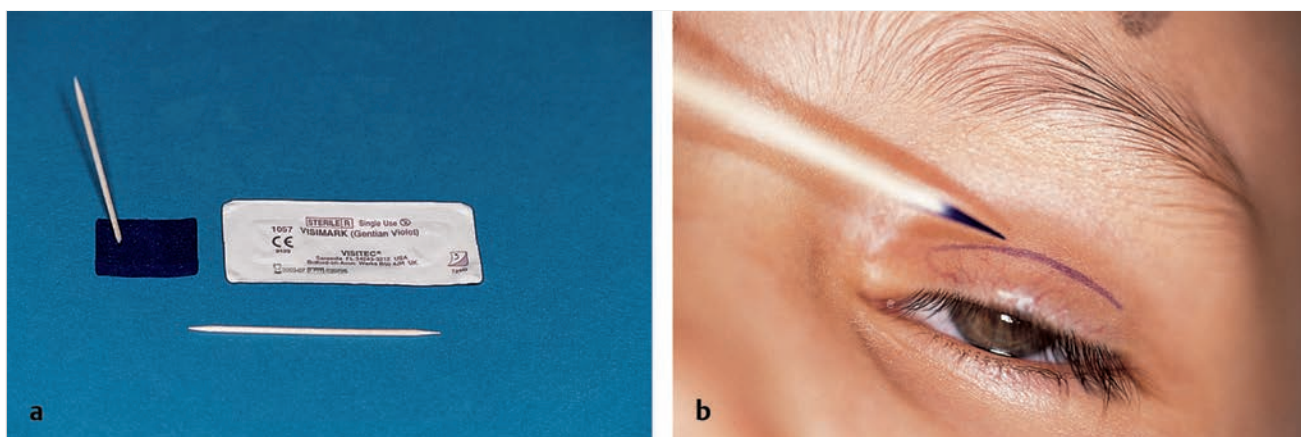


Fig. 1.5 (a) A gentian violet pad used with a cocktail stick. (b) An upper eyelid skin crease incision being marked with a cocktail stick that has been inserted into a gentian violet marker pad.



Fig. 1.6 (a) Keloid scarring in an Asian patient. (b) A lower eyelid hypertrophic scar.

retractors are very useful and are available in different sizes. They are also used to evert the upper and lower eyelids in conjunction with a gray line traction suture for posterior-approach surgery, such as a posterior approach Müller's muscle resection. It is important to use the appropriate size of Desmarres retractor to evert the eyelid and avoid undue pressure being applied to the supraorbital margin by the retractor when everting the upper eyelid.

Sewall retractors (► Fig. 1.10) are used to retract the orbital contents during an orbital fracture repair, an orbital decompression, or an orbital exenteration. The blades are available in different sizes and should be selected appropriately. They can be used in conjunction with a piece of Supramid to improve the retraction of orbital fat during these procedures. Typically, these retractors are placed into the subperiosteal space. Great care, however, must be taken by the assistant when using these retractors, because extreme force can be applied to the globe. In addition, it is easy to "toe-in" the tip of the retractor and tear the periorbita. This can also lead to direct trauma to the optic nerve.

Wright retractors (► Fig. 1.11) are more delicate retractors that are used to retract tissues in the orbit during the course of the exploration of an orbital mass or during the course of an

optic nerve sheath fenestration. Malleable retractors are mainly used to protect the orbital contents from the use of drills and saws. The use of retractors in orbital surgery is discussed in more detail in Chapters 19 to 20.

Traction sutures not only improve surgical exposure but also assist in hemostasis, such as in an external DCR (► Fig. 1.12).

Safe surgical dissection is greatly facilitated by adequate magnification and illumination of the surgical field. The surgeon should wear surgical loupes, which do not unduly restrict the visual field. The loupes should be comfortable and should not require adjustment; typically, they provide 2.5 to 3.5 times magnification; they should be fitted with protective side shields (► Fig. 1.13a).

The use of a headlight offers a number of advantages over an overhead operating lamp. The light is always focused on the surgical field, which is not placed in shadow by the surgeon or assistant's hands. The use of a headlight is essential in surgery within cavities, such as an external DCR or an orbital decompression. Modern lights can be fitted to the surgical loupes and turned on and off by the surgeon by a switch that is operated by the inside of the elbow and worn beneath the surgical gown (► Fig. 1.13b).

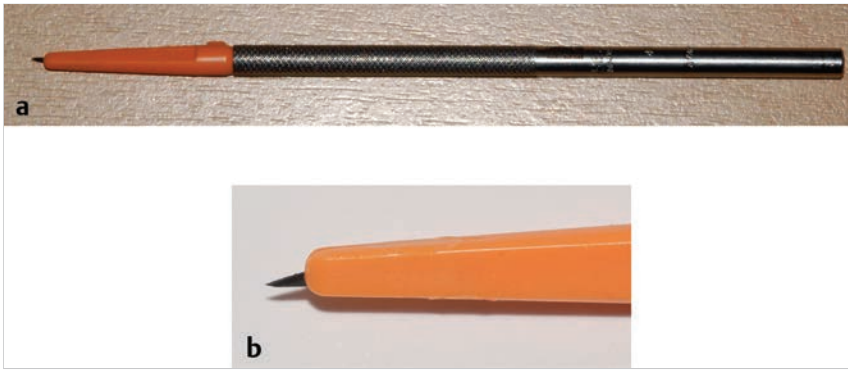


Fig. 1.8 (a) A microsharp blade on a Beaver blade handle. (b) A close-up of the disposable blade.

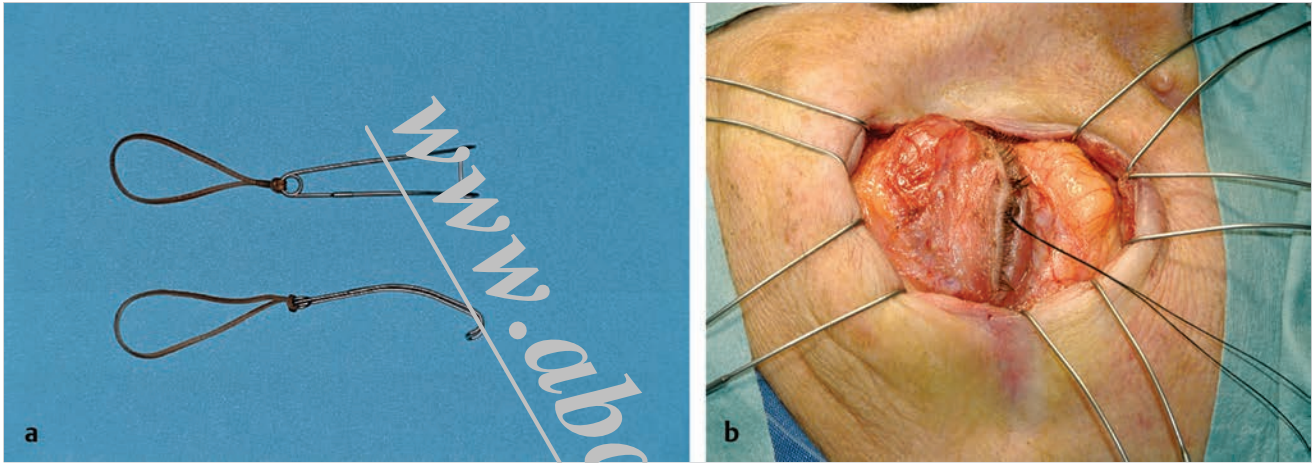


Fig. 1.9 (a) Jaffe retractors. (b) Use of the Jaffe retractors for an orbital exenteration.

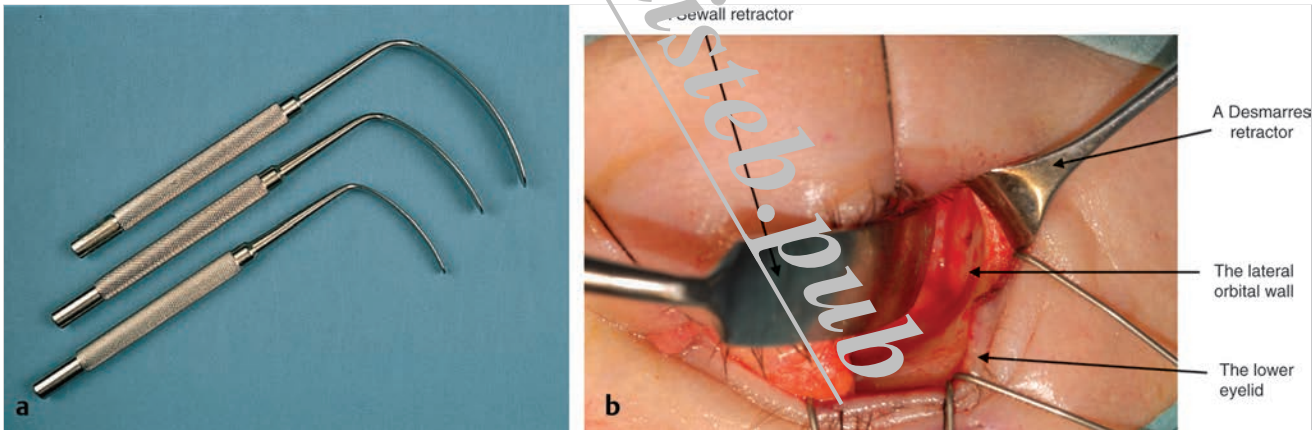


Fig. 1.10 (a,b) Sewall retractors.

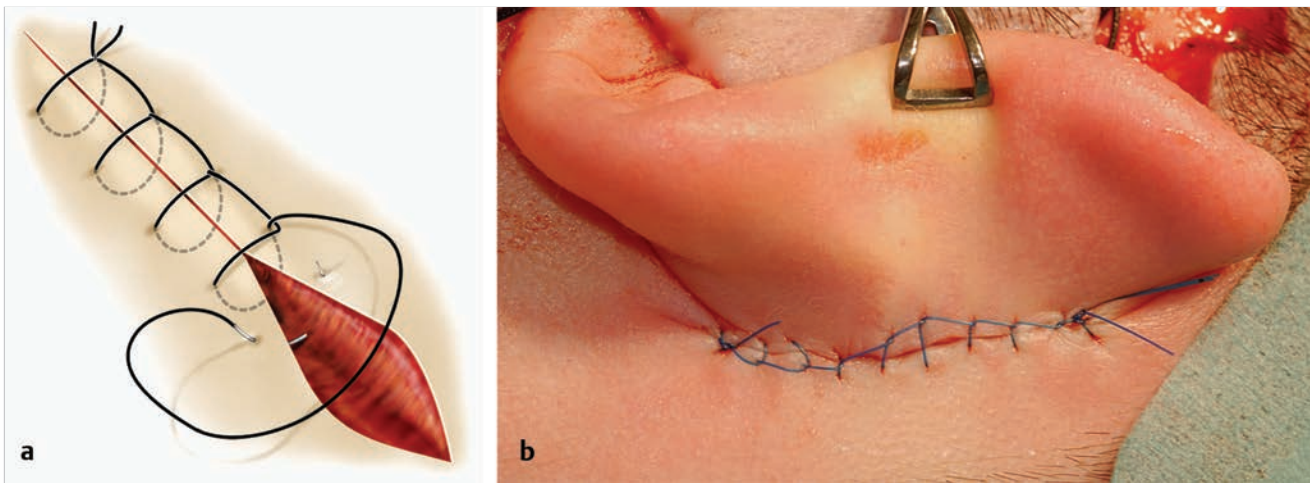


Fig. 1.21 (a) A continuous interlocking percutaneous suture. (b) A continuous interlocking percutaneous suture used to close a postauricular skin graft donor site wound.

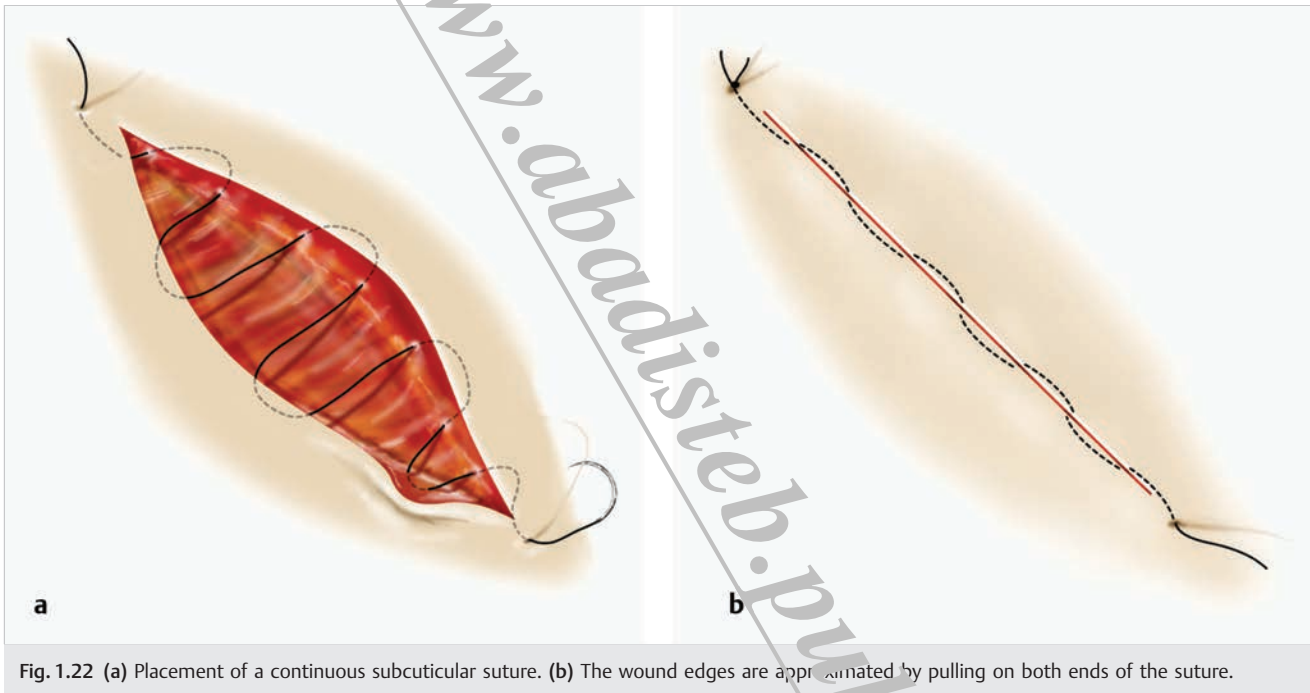


Fig. 1.22 (a) Placement of a continuous subcuticular suture. (b) The wound edges are approximated by pulling on both ends of the suture.



Fig. 1.29 (a) A bowstring external dacryocystorhinostomy scar marked with double z-plasty incisions. (b) The skin of the bridge of the nose is stretched to demonstrate the positions of the incision marks. (c) The z-plasty flaps have been transposed and sutured.

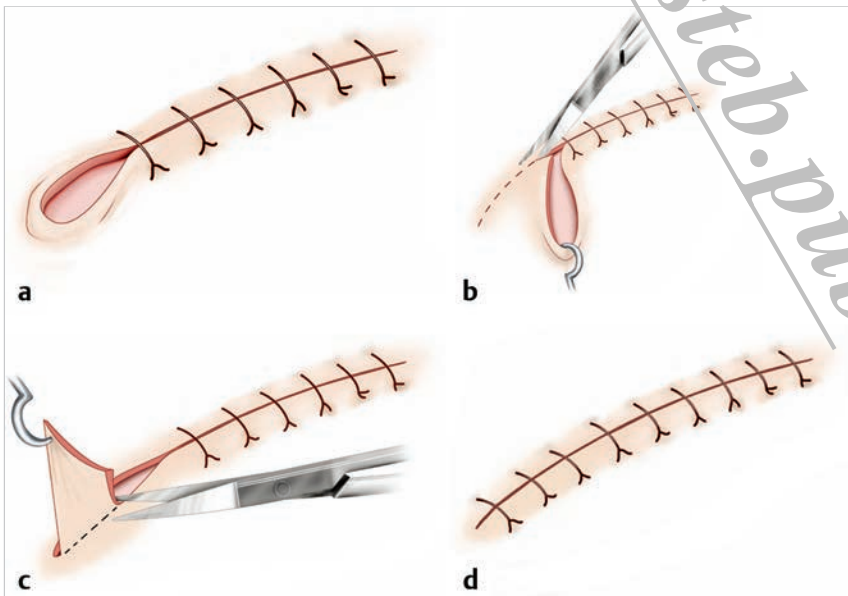


Fig. 1.30 (a) A dog-ear deformity. (b) The apex of the dog ear is drawn away from the line of the wound with a skin hook, and an incision is made along the line of the wound. (c) The triangle of skin and subcutaneous tissue is laid across the wound, and the excess tissue is trimmed away. (d) The wound is closed.

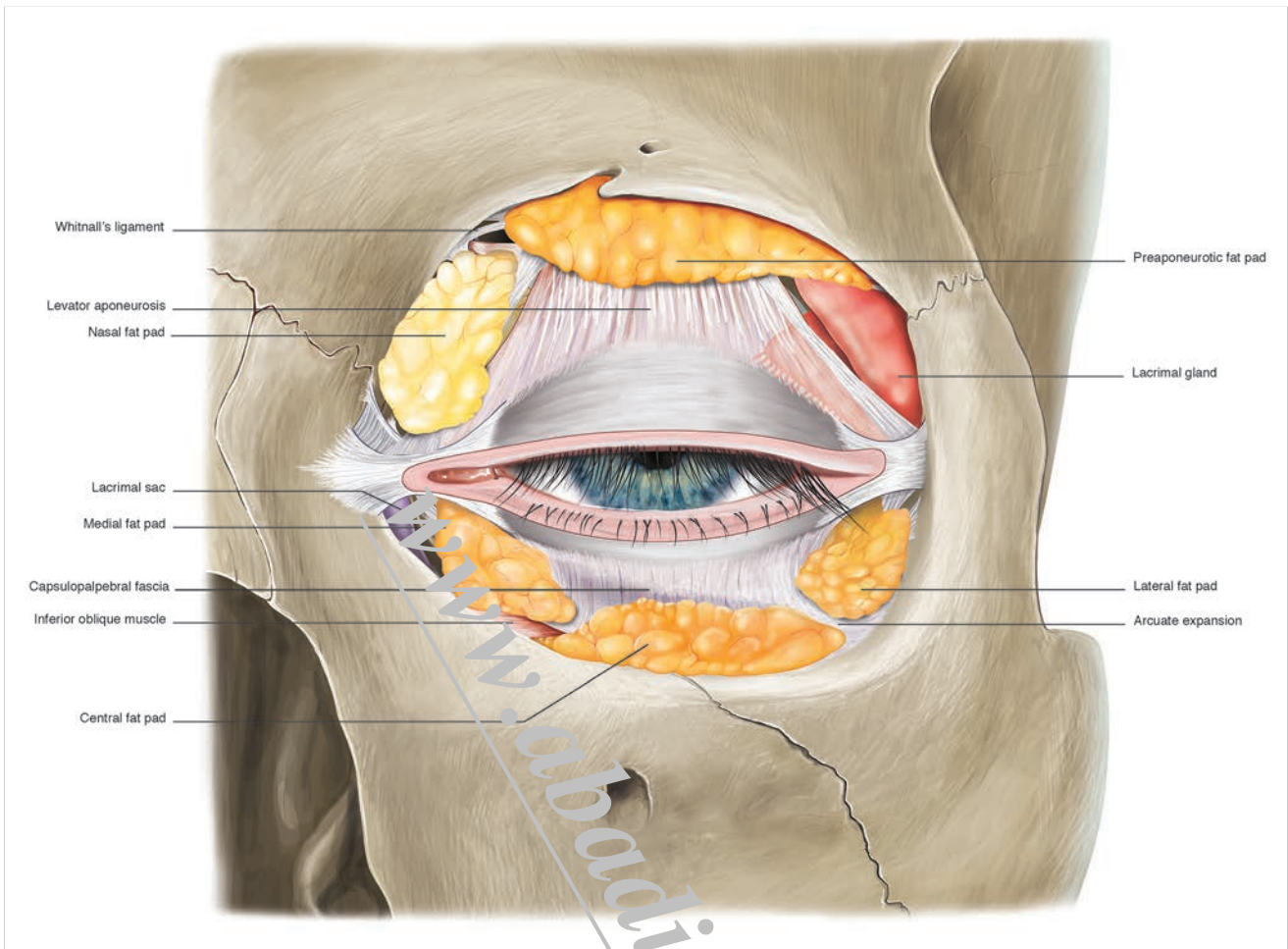


Fig. 2.18 The upper and lower eyelid fat pads.

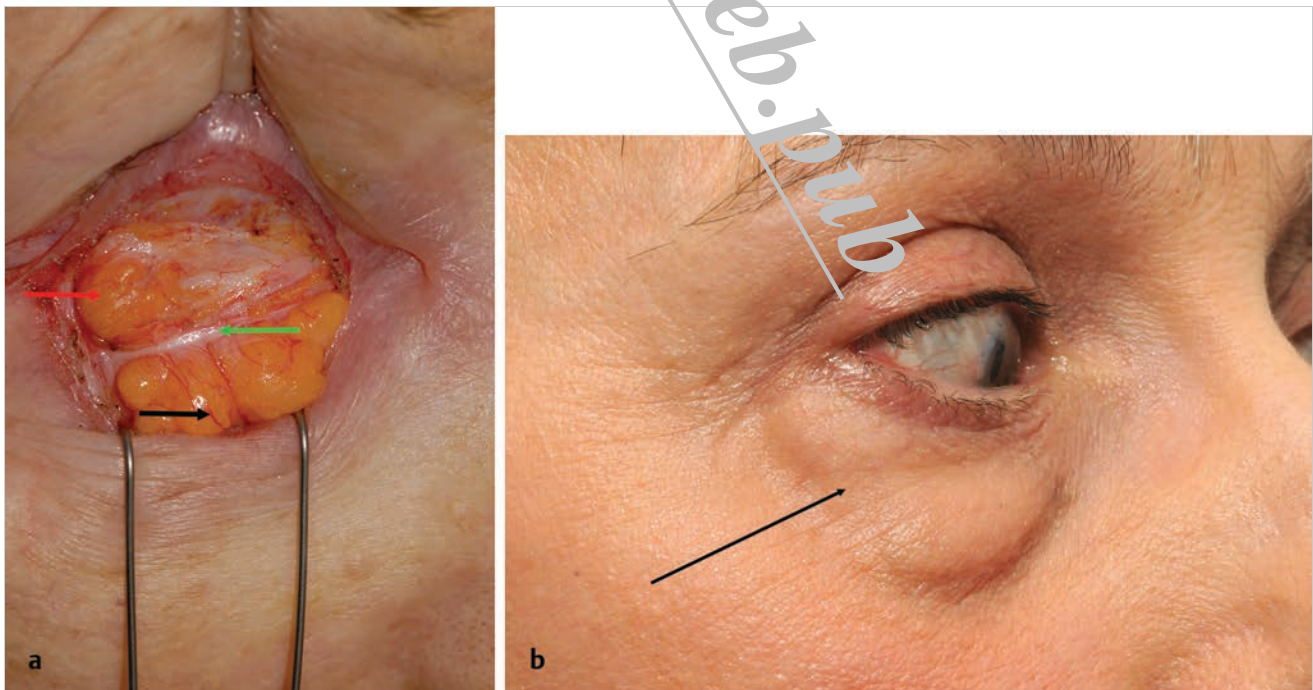


Fig. 2.19 (a) The lateral and central fat pads separated by the arcuate expansion in a right lower eyelid. Lateral fat pad (red arrow). Central fat pad (black arrow). Arcuate expansion (green arrow). (b) The position of the arcuate expansion (arrow) is seen in this patient whose lateral and central lower lid fat pads have prolapsed.

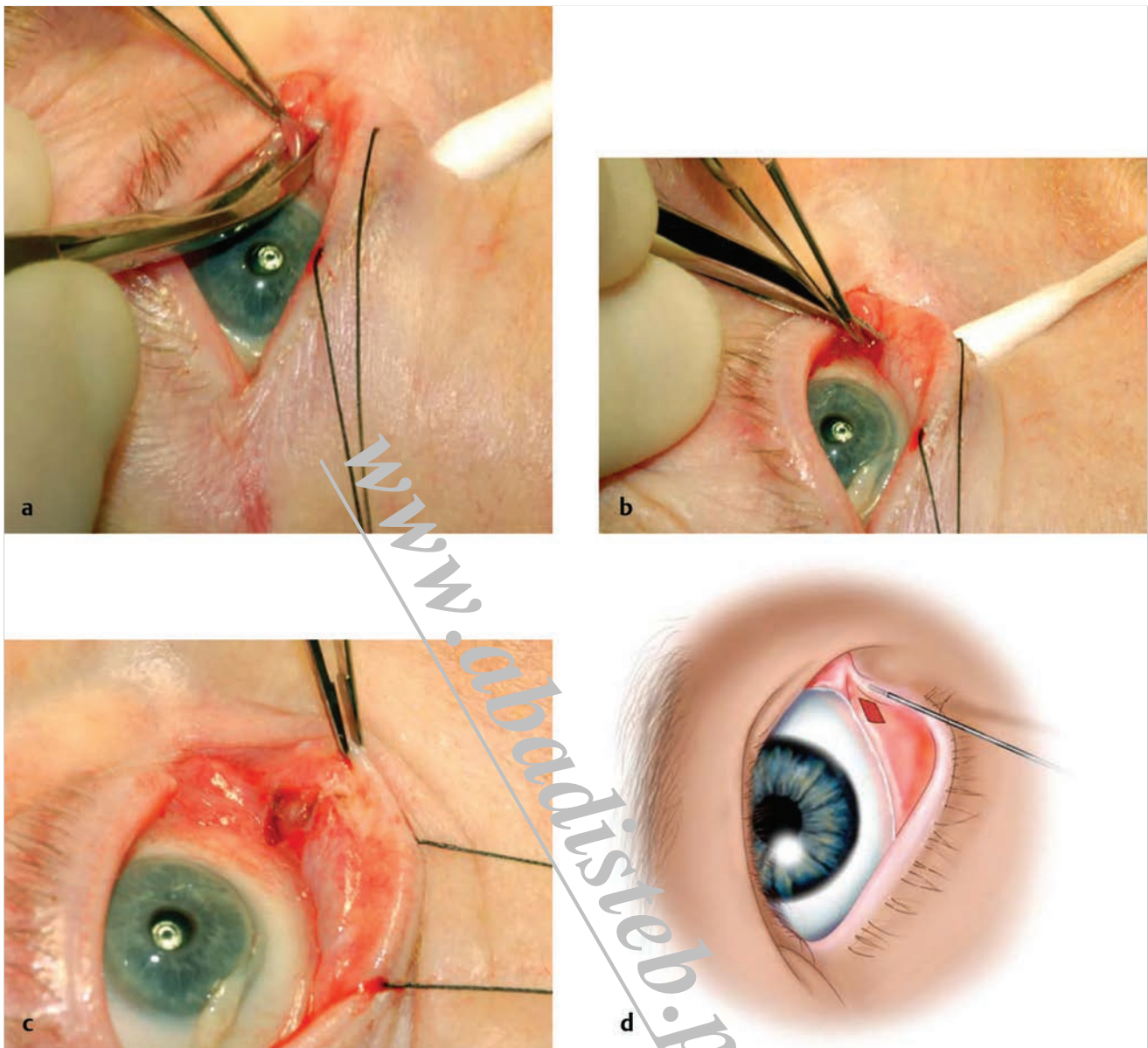


Fig. 6.12 (a) The conjunctiva is lifted with a pair of Paufigue forceps and cut. (b) A further cut is made from the opposite side while keeping hold of the conjunctiva with the forceps. (c) A diamond-shaped tissue defect remains. (d) The location of the diamond-shaped excision of conjunctiva. A 00 Bowman probe has been inserted into the inferior canalculus to protect it during the conjunctival resection.

(Continued)

should be performed before completing the repair of any lateral eyelid-tightening procedure.

Lateral Wedge Resection

The wedge resection is performed at the junction of the lateral third with the medial two-thirds of the eyelid. It is important to ensure that a retraction of the lower eyelid is not caused by too aggressive a resection of eyelid tissue.

Surgical Procedure

This is as described previously.

Lateral Wedge Resection with Skin–Muscle Blepharoplasty

The vertical cutaneous scar created by a simple wedge resection can be avoided by creating a skin–muscle blepharoplasty flap and performing the wedge resection beneath this.

Surgical Procedure

1. Two to three milliliters of 0.5% bupivacaine with 1:200,000 units of adrenaline mixed 50:50 with 2% lidocaine with 1:80,000 units of adrenaline are injected subcutaneously along the entire length of the eyelid.



Fig. 9.2 (a) A patient with a right lower motor neuron facial palsy demonstrating right upper eyelid retraction, a right lower eyelid paralytic ectropion, and chronic inferior exposure keratopathy. (b) A patient with exposure keratopathy highlighted by the use of fluorescein. (c) A patient with a right facial palsy showing a right brow ptosis that is masking retraction of the right upper eyelid. (d) Marked lagophthalmos but an excellent Bell's phenomenon are evident. (e) A patient with a left posttraumatic facial palsy. Her widened left palpebral aperture is a result of both upper and lower eyelid retraction. (f) A patient with Ramsay–Hunt syndrome.

upper lid retraction is masked by the effects of a brow ptosis. Some patients also develop a gradual contracture of the anterior lamella of the upper eyelid, which further aggravates lagophthalmos.)

6. The corneal sensation must be tested before the instillation of any topical anesthetic agents; the cutaneous sensation in the distribution of the branches of the trigeminal nerve should also be tested.

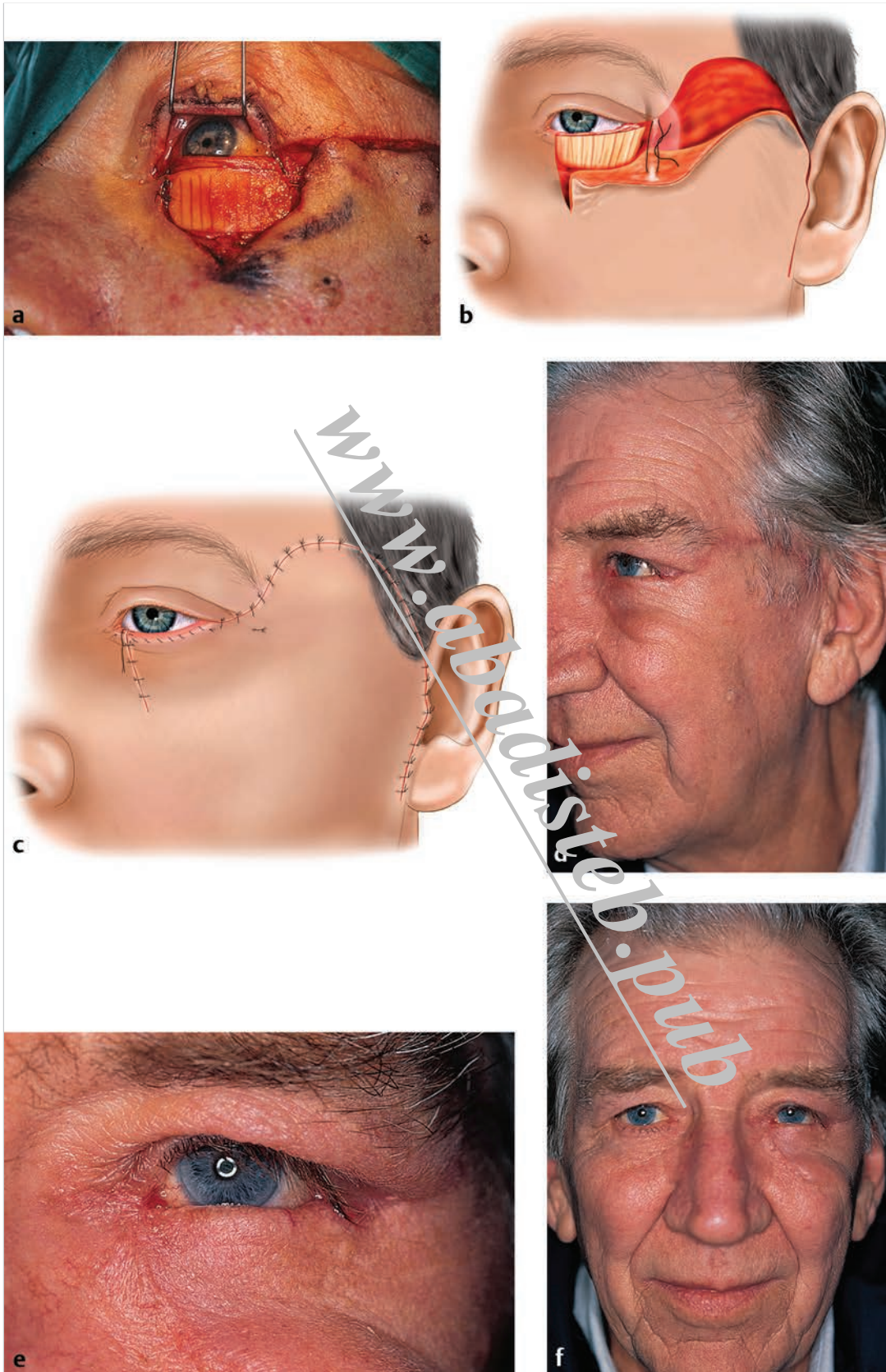


Fig. 12.17 (a) A nasal septal cartilage graft scored vertically, creating an anterior convexity of the graft. A frill of nasal mucosa is left superiorly to create a mucocutaneous junction. (b) The deep tissue of the flap is hitched to the periosteum of the lateral orbital margin. (c) A cheek rotation flap and posterior lamellar nasal septal cartilage graft has been completed. (d-f) The patient seen 1 week after reconstruction of an extensive left lower lid tumor excision defect using a Mustardé cheek rotation flap with a nasal septal cartilage graft.