

**Hannah Gilchrist**

MBBS, is Resident Medical Officer, City Eye Centre, Brisbane, Queensland. hannah_gilchrist@mac.com

Graham Lee

MD, MBBS, FRANZCO, is Consultant Ophthalmologist, City Eye Centre, Brisbane, Associate Professor of Ophthalmology, University of Queensland, and Director of Corneal and Glaucoma Services, Royal Brisbane Hospital, Queensland.

Management of chalazia in general practice

Background

Chalazia, or meibomian cysts, are often seen in general practice. While most can be resolved with a minor operation in a designated procedure room, there is a lack of published literature on the details of the incision and curettage used to treat this condition.

Objective

This article outlines the management and treatment of chalazia in the general practice setting.

Discussion

Chalazia are a common cause of morbidity in people of all ages. Treatment, which is based on clinical diagnosis, can involve conservative management, intralesional steroid injection, or incision and curettage.

■ **A chalazion, or meibomian cyst, is a benign lipogranulomatous collection arising from one of the meibomian glands lining the tarsal plate of the eyelid (Figure 1). A common cause of morbidity among people of all age groups,¹ the chalazion is distinct from a sty, which arises from an infected hair follicle on the lid margin (Figure 2). Chalazia are caused by lipid inspissation in the meibomian glands, which ruptures and releases lipid from the gland into the surrounding tissues,² causing a granulomatous inflammatory reaction.³ Patients with underlying conditions such as rosacea, seborrheic dermatitis or blepharitis are more prone to multiple and recurrent chalazia.^{1,4}**

A chalazion arises as a mild to moderately tender red swelling of the upper or lower eyelid (Figure 1). At various locations and stages, multiple lesions may appear. Clinical onset of a chalazion occurs over weeks, with the redness and tenderness subsiding while the lump remains. Patients usually present when the lump becomes symptomatic, either due to cosmetic reasons or if the chalazion is of a considerable size, because it is causing ptosis, astigmatism and/or vision loss. If left untreated, chalazia may spontaneously resolve over many months. Treatment is based on clinical diagnosis.^{3,5} Recurrent chalazia must have the curettings sent for histology to exclude sebaceous cell carcinoma.

Treatment

Conservative treatment

Conservative treatment is the first line of management in resolving chalazia. In 46% of cases, conservative management has been found to resolve the condition.⁶ Conservative measures include instructing the patient to perform twice daily warm compresses (3–5 minutes) and massage (either with fingers or cotton tips) to assist in the release of the chalazion contents. The direction of the massage should be over the lesion, in the direction of the eyelashes. Topical antibiotic ointment, such as chloramphenicol 1%, should be applied four times per day if there is significant redness, swelling

Figure 1. Lower lid chalazion



or discharge. If there is associated cellulitis of the area, oral, and occasionally intravenous, antibiotics should be prescribed.

Intralesional steroid injection

If conservative measures fail to resolve the chalazion, another treatment option is intralesional steroid injections.¹ Intralesional triamcinolone injections have been found to effectively resolve chalazia in 75^{8,9} to 84%⁶ of cases, with the failed cases requiring incision and curettage.

Procedure

The procedure involves an aseptic technique topical anaesthetic and transconjunctival injection of 0.2 mL of triamcinolone (10 mg/mL) using a 27 gauge needle.⁶ No eye pad is required for the procedure. Patients are prescribed chloramphenicol ointment 1% four times per day for 5 days, with gentle massage for 5 minutes after each ointment application. They are then followed up in 3 weeks. If the chalazia recur, additional injections may be required.

When performing the procedure, care must be taken to avoid perforation of the globe. There is also the potential for a steroid induced rise in intraocular pressure, so this needs to be monitored and treated with antiglaucoma medications as appropriate.

Figure 2. Styte on lid margin



Figure 3. Eyelid anatomy: 1) upper punctum, 2) lower punctum, 3) tarsal conjunctiva with visible Meibomian glands and adjacent orifices along the lid margin, 4) caruncle, 5) Pilca semilunaris

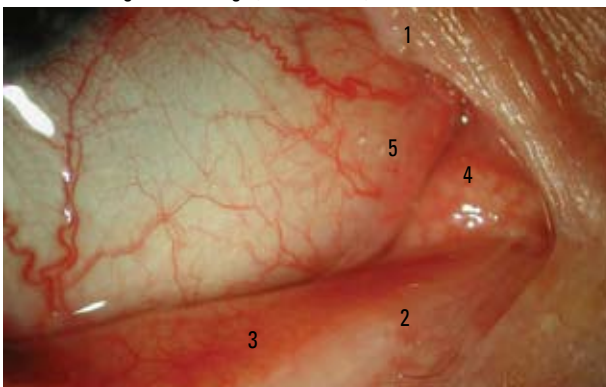


Table 1. List of equipment for incision and curettage

• Topical anaesthetic (eg. oxybuprocaine 4%)
• Lignocaine 1% with adrenaline (1/100 000)
• 27–30 gauge short needle
• 3 mL syringe
• Sterile gloves
• Dressing pack
• Aqueous povidone iodine 5%
• Eye drape (optional)
• Chalazion clamp
• #11 blade
• Scalpel handle (optional)
• Small curette
• Fine toothed forceps (required if removing pseudocapsule)
• Fine scissors (required if removing pseudocapsule)
• Cautery (preferable but not always required)
• Antibiotic ointment (eg. chloramphenicol 1%)
• Two eyepads
• Tape (eg. micropore, 1 inch)

Figure 4. Equipment setup for chalazion incision and curettage



If the injection is done via a subcutaneous route, localised skin depigmentation can occur. The potential for this is minimised if the procedure is performed via the transconjunctival route.⁶

Incision and curettage

The third form of treatment for chalazia is incision and curettage. An incision and curettage technique, including removal of the pseudocapsule found surrounding the meibomian cyst, is detailed below. Structures of significance are shown in *Figure 3*.

The pseudocapsule consists of a portion of the tarsal plate in which fibroblastic scar tissue has been laid down. Excision of the pseudocapsule cosmetically debulks the tumour, while reducing the risk of re-accumulation of meibomian secretion in that particular gland.

The following incision and curettage procedure should be carried out in a designated procedure room with attention to

aseptic technique. The equipment required is listed in *Table 1* and illustrated in (*Figure 4*). A disposable kit (Chalazion Kit GEO 585, Austramedex, Designs For Vision P/L) is also available, however this kit does not provide the instruments required for pseudocapsule removal.

If possible, patients on anticoagulants should cease taking this medication before undergoing the procedure.

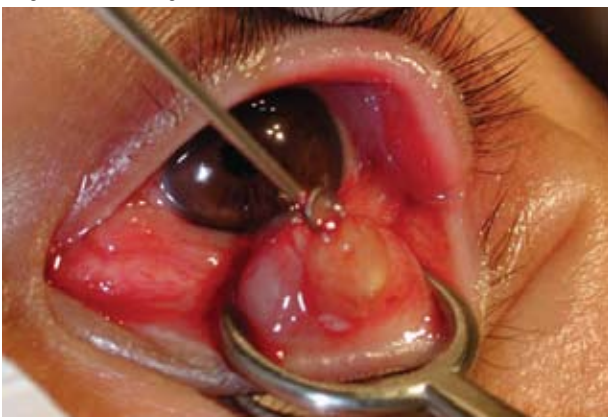
Figure 5. Infiltration of local anaesthetic



Figure 6. Vertical incision into the chalazion



Figure 7. Removing the contents of the chalazion



Procedure

- Locally anaesthetise the eye by instilling topical oxybuprocaine 0.4%. Wipe the skin injection site with isopropyl alcohol and infiltrate lignocaine 1% with adrenaline (1/100 000) into the subcutaneous tissue surrounding the chalazion (*Figure 5*). A 27–30 gauge needle on a 3–5 mL syringe is ideal for this. Care must be taken to avoid perforation of the underlying globe with the needle tip. To minimise risk, infiltrate just below the skin surface and ask the patient to look away from the injection site. Smaller chalazia can be marked cutaneously with a waterproof marker before infiltration to ensure they can be readily located
- Apply aqueous povidone iodine 5% preparation to the eye and lids. If the patient is allergic to topical iodine then aqueous chlorhexidine 0.1% is an alternative
- Place a self retaining chalazion clamp around the lesion and evert the eyelid. Tighten the clamp to restrict bleeding. If the patient can feel pain from the clamp, further infiltration of local anaesthetic may be required. Medially placed chalazia are anatomically close to the punctual and canalicular apparatus, therefore there is potential risk of permanent damage to these structures and resulting epiphora. If there is any doubt in regards to safety in performing the incision, refer to a more experienced clinician. A lacrimal probe can be placed in the punctum to define the canaliculus position and avoid inadvertent trauma
- Identify the blocked meibomian gland from the tarsal surface. Using a #11 blade, make a vertical incision perpendicular to the lid margin into the bulk of the chalazion contents (*Figure 6*). Care should be taken not to involve the lid margin, as this will result in lid notching. Other techniques describe an additional horizontal incision with flap excision, but we have found this unnecessary. Perforation of the eyelid skin overlying the chalazion should be avoided, as this can cause external scarring
- Use a small curette to fully remove the contents of the chalazion (*Figure 7*). If the chalazia are recurrent, or contain unusual contents, the curettings can be sent for histopathological examination
- Using a pair of fine toothed forceps, apply traction to the surrounding tarsal tissue. If a fibrous wall or pseudocapsule is identified, a pair of scissors can be used to gently excise this tissue (*Figure 8*). This step may not be necessary in all cases; it applies primarily to larger and more chronic lesions. Avoid removing excessive normal tarsal tissue as this could result in scarring and damage to the eyelid structure
- Once the excision is complete, release the clamp. Control any bleeding with direct tamponade, or, if necessary, cautery (*Figure 9*). Bleeding can be more profuse if the tarsal arterial arcades are severed. To avoid postoperative haemorrhage, this bleeding must be controlled
- Apply chloramphenicol ointment 1% and a firm double pad to the eye. Instruct the patient to remove the eye pads after 4 hours. Chloramphenicol ointment 1% should be prescribed four times per day for 5 days. Oral antibiotics are only necessary if there is evidence

Figure 8. Using scissors to excise tissue



Figure 9. Cauterising the bleeding



of infection or cellulitis. Patients should be advised to return for follow up if there are any complications such as swelling, redness, recurrence, or bleeding that doesn't settle with direct compression. Instructions should also be given on future lid cleaning including hot compression, massage and scrubs in order to reduce meibomian inspissation and further chalazion development.

Persistent chalazia

If the condition recurs despite appropriate management and treatment, the diagnosis of chalazion must be reassessed with consideration given to the possibility of underlying malignancy such as sebaceous cell carcinoma. If there is any doubt regarding the diagnosis of a chalazion, the curettings should be sent for histopathological examination.

Discussion

With appropriate instruction and set up, surgical removal of chalazia can be performed as a minor operation in a designated procedure room. The technique described in this article is an augmented approach to the conventional surgical technique of incision and curettage of the chalazion contents. In terms of chalazia resolution

and recurrence rates, this approach has proven more effective than simple incision and drainage.^{6,8,9} By removing the inflamed portion of the tarsal plate, this technique also removes any granulomatous material, which would otherwise need to be absorbed by the body. This promotes quick healing, improves the immediate cosmetic appearance and reduces the recurrence rate.

Summary of important points

- Chalazia can be treated in the general practice setting.
- Treatment is based on clinical diagnosis.
- Conservative management is the first line of treatment.
- If conservative treatment fails, options include intralesional steroid injections and surgical removal.
- For GPs, curetting or excision of a chalazion is categorised as procedural in some indemnity insurance policies.
- Complications include globe perforation, canalicular trauma, haemorrhage and infection.
- Recurrent or unusual chalazia require referral to an ophthalmologist and histopathological examination of the curettings to exclude malignancy.

Conflict of interest: none declared.

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