# Concretions (conjunctival lithiasis)

<table>
<thead>
<tr>
<th><strong>Aetiology</strong></th>
<th>Conjunctival epithelial inclusion cysts containing epithelial and keratin debris with secondary calcification</th>
</tr>
</thead>
</table>
| **Predisposing factors** | Common, especially over the age of 50 years (prevalence in ophthalmology outpatient population mean age 46.8 years has been reported as approximately 40%)  
Chronic conjunctivitis (any cause, including contact lens wear)  
Accumulation of lipid under conjunctiva, e.g. concretions grouped around an old chalazion |
| **Symptoms** | Usually none  
May erode through the epithelium  
- foreign body sensation |
| **Signs** | Small white/yellow-white bodies with distinct edges in tarsal (upper or lower) conjunctiva  
Single or multiple  
Usually <1mm diam, sometimes up to 3mm  
- appear larger if confluent  
Usually low profile but may be raised if large |
| **Differential diagnosis** | Conjunctival inclusion cysts  
- thin walled cysts containing clear or translucent fluid  
Follicles  
- focal lymphoid hyperplasia |
| **Management by Optometrist** | Practitioners should recognise their limitations and where necessary seek further advice or refer the patient elsewhere |
| **Non pharmacological** | Treatment rarely required  
Artificial tears and lubricating ointments (drops for use during the day, unmedicated ointment for use at bedtime)  
(GRADE*: Level of evidence = low, Strength of recommendation = strong) |

**NB Patients on long-term medication may develop sensitivity reactions which may be to active ingredients or to preservative systems (see Clinical Management Guideline on Conjunctivitis Medicamentosa). They should be switched to unpreserved preparations**  
Eroded concretions leading to irritation can be removed at the slit lamp  
- topical anaesthetic  
- tease out with hypodermic needle  
- any bleeding should respond quickly to finger pressure on the lid  
  - (N.B. check first that patient has no bleeding disorder and is not taking aspirin or anti-coagulants)  
- consider topical antibiotic as prophylactic if infection seems likely  
  (e.g. gutt. or oc. chloramphenicol)  
(GRADE*: Level of evidence = low, Strength of recommendation = weak) |
| **Pharmacological** | No specific drug treatment available  
Topical anaesthetic and antibiotic for minor surgery as above  
(GRADE*: Level of evidence = low, Strength of recommendation = weak) |
| **Management Category** | **B3: Management to resolution** |
| **Possible management by Ophthalmologist** | Not normally required |

**Evidence base**  
*GRADE: Grading of Recommendations Assessment, Development and
Concretions (conjunctival lithiasis)

<table>
<thead>
<tr>
<th>Evaluation (see <a href="http://gradeworkinggroup.org/toolbox/index.htm">http://gradeworkinggroup.org/toolbox/index.htm</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources of evidence</td>
</tr>
</tbody>
</table>

LAY SUMMARY
Concretions are small white or yellowish dots, usually less than 1mm in diameter, commonly seen on the undersides of the eyelids. They contain cell debris and calcium. They may be the result of past inflammation. Occasionally they cause irritation or the feeling that there is something in the eye.

If concretions are causing symptoms, the optometrist may offer to remove them. After numbing the eye surface with an anaesthetic drop, the concretions can usually be teased out with the tip of a hypodermic needle. Rarely, antibiotic drops may be prescribed. Such cases do not usually need to be referred to the ophthalmologist.