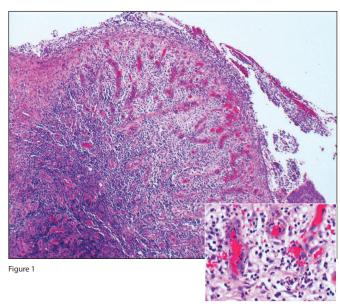
History

- A 67-year-old female patient had chronic left canaliculitis becoming painful and more recently complicated by left lower blepharitis.
- Examination revealed a small fleshy lump on the medial aspect of the left lower eyelid. There was also swelling of the punctum and discharge of pus and yellow concretions upon expression.
- Excision of the lump was performed along with canalicular curettage. Specimens sent for ophthalmic histopathological assessment.

Questions

- 1. What does Figure 1 show?
- 2. Figure 2 represents H&E stained material from lacrimal sac. What is it?
- 3. What does Figure 3 show and which was the stain used?
- 4. What is the most likely diagnosis, and what is the most common causative agent?
- 5. Which other micro-organisms may show similar granules and how is a definitive diagnosis achieved?



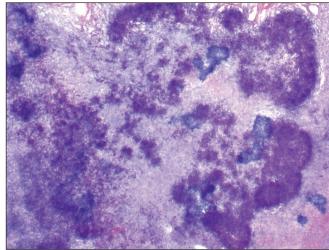


Figure 2

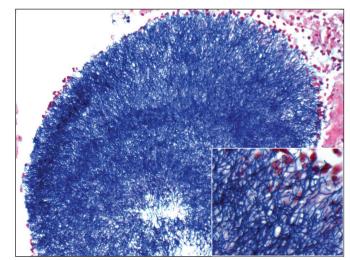


Figure :

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- 5. Nocardia brasiliensis or Streptomyces madurae may show similar granules. The definitive diagnosis requires culture of the pathogen.
- 4. Canaliculitis due to Actinomyces (anaerobic, gram positive, filamentous or rod bacteria). The most common causative agent is Actinomyces israelii.
 - 3. Gram stained section demonstrating gram-positive filamentous bacteria.
 - term may be misleading, as the granules do not contain sulphur. The name actually relates to the yellow colour of the granule in pus.
- cells including plentiful neutrophils and usually with surface erosion.

 2. The image shows amorphous hematoxiphilic material representing sulphur granules which ultimately consist of tangled filamentous bacteria. This
- 7. This is a pyogenic granuloma which consists of a haemangioma-like vascular proliferation with oedematous stroma infiltrated by mixed inflammatory

