

Can bone wax cause cholesterol granuloma in the petrous apex? A case report

ABSTRACT

BACKGROUND: Cholesterol granuloma (CG) is a rare entity but is the commonest lesion in the petrous apex. They are associated with chronic ear disease and previous temporal bone surgery. While bone wax has been known to cause foreign body reaction due to its non-resorbable property in the mastoid, it has not been documented to cause CG formation. **CASE PRESENTATION:** We described a 43 years old male who presented with a right mastoid swelling, nine years after a right retro-sigmoid craniotomy and excision for a cerebellopontine angle meningioma. He also had multiple cranial neuropathies involving trigeminal, facial and vestibulocochlear nerves. Temporal bone CT and MRI showed features suggestive of cholesterol granuloma with extensive bony erosions. He was treated with surgical excision and drainage where bone wax residues were found intraoperatively. Histopathological analysis of the lesion confirmed the diagnosis of cholesterol granuloma. Post-operatively, the mastoid swelling resolved and his recovery was uneventful. **CONCLUSION:** Our case showed that CG could manifest as a complication of bone wax usage in a neurosurgical procedure. Even though further study is needed to draw a definitive conclusion on this theory, we believe this paper will contribute to the current literature as it is the only reported case of cholesterol granuloma with bone wax as the possible causative agent. This is important so that surgeons are aware of this potential complication and use this haemostatic agent more judiciously.