

A child with an unusual lump in the cheek

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Case report

A six year old previously healthy girl presented with a painless lump over the right cheek of one month duration. There were no other lumps in the body. She was born to non-consanguineous parents with an uncomplicated perinatal period. Her growth and immunization were age appropriate. Examination revealed an adequately grown child without pallor, bone tenderness or lymphadenopathy. The BCG scar was present. A firm non tender lump measuring 2cm x 2cm was noted in the subcutaneous tissue of the right cheek. There was no hepatosplenomegaly. Cardiovascular, respiratory and nervous system examination was normal.

Ultrasound scan of the cheek revealed an avascular hypochoic lesion in the deep subcutaneous tissue with surrounding mild inflammatory changes suggestive of a worm granuloma. Erythrocyte sedimentation rate was 14 mm in the first hour. The haemoglobin was 12.4 g/dl. The white blood cell count was 8,600/cu mm with 60% neutrophils, 35% lymphocytes. Eosinophil count was 250 / cu mm. Mantoux test was negative.

Excision of the lump through the buccal mucosa was done under general anaesthesia. The lump was found deep to the buccinators muscle and was excised completely. Histology revealed a sheet of eosinophils with granulomatous inflammation

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around a mature adult worm morphologically compatible with *Dirofilaria repens* (Figures 1 and 2). The adult worm was excised fully. The child recovered completely.

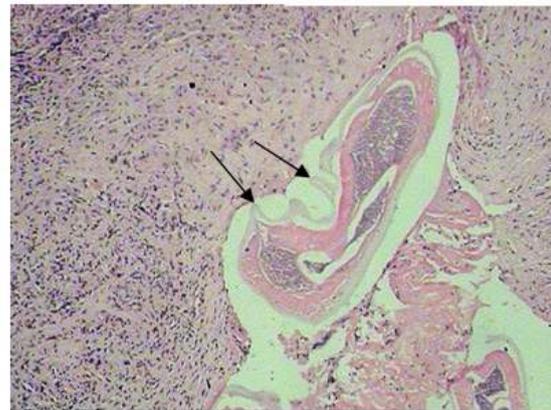


Figure 1: Adult *Dirofilaria* worm with circular ridges. There is surrounding inflammation. Haematoxylin and eosin x 400

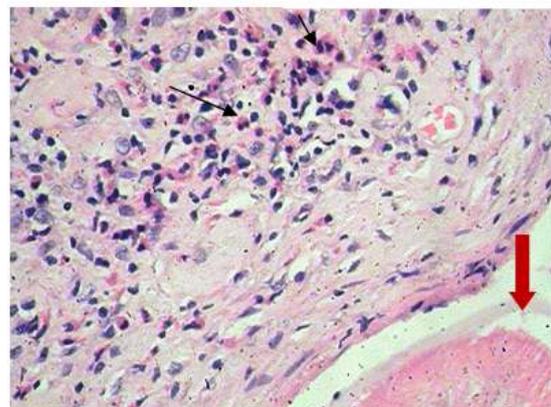


Figure 2: Chronic inflammatory cells with sheets of eosinophils (bilobed nuclei and eosinophilic cytoplasm - arrows) adjacent to the adult worm (Block arrow)

Discussion

Differential diagnosis of a lump in the cheek include fibrosed / calcified lymph node, adenoma arising from the parotid gland or minor salivary glands, an inspissated submucosal abscess, tuberculosis and a foreign body. Parasitic infestation was asymptomatic without eosinophilia.

Dirofilariasis is an uncommon zoonosis where humans are accidental dead end hosts¹. It is caused by filarial nematodes of genus *Dirofilaria*, where canines are the principal reservoir host². Subcutaneous nodules, lung parenchymal disease

and ocular involvement are known manifestations of *Dirofilariasis*². *Aedes aegypti*, *Armigeres subalbatus*, *Mansonia uniformis* and *M. annulifera* are mosquito vectors of *dirofilariasis*³. Diethylcarbamazine can be used in the treatment of *dirofilariasis*⁴. Surgical removal of the subcutaneous nodule is helpful in both diagnosis and treatment². *Dirofilariasis* should be considered in the differential diagnosis of subcutaneous lumps and ultrasound scan is helpful in the diagnosis.

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