An Unusual Presentation Of A Glomus Tumour

N Nugent, F Henry, M O’Shaughnessy
Department of Plastic Surgery, Cork University Hospital, Wilton, Cork

Abstract
Glomus tumours are benign, soft tissue tumours, usually of fingertips. Classically they present with severe pain, temperature sensitivity and localised tenderness. The diagnosis is often delayed due to sometimes non-specific symptoms and rarity of the disorder. While usually a clinical diagnosis, imaging may be necessary for diagnosis and localisation. We present a case of glomus tumour of the fingertip with an unusual history.

Introduction
Glomus tumours are rare vascular tumours. They are hamartomas from the neuromyoarterial apparatus most commonly found in fingertips, especially subungally, although they can occur elsewhere. They characteristically present with a triad of temperature sensitivity, severe pain and localized tenderness, but can be difficult to diagnose. We present a case of a glomus tumour with an unusual history.

Case Report
A 46 year old right hand dominant male presented with chronic pain and tenderness of his left ring fingertip. He had sustained a laceration to this area when eleven years old, for which he had had no medical intervention. Approximately five years later, he began to have progressively worsening pain in this area. Many years later, he underwent exploration of the area for a presumed neuroma by a different surgeon and a neural branch was buried in the bone. He remained symptomatic and was then referred to our service. There was a scar on the radial side of his left ring finger from previous surgery, and exquisite tenderness radially on the pulp. Pulp sensation was intact. Magnetic resonance imaging (MRI) showed a soft tissue swelling in the pulp distal to the trifurcation of the radial digital nerve (see Figures 1 and 2). The mass was indistinguishable from the nerve and a provisional diagnosis of a neuroma was made. A glomus tumour was part of the differential diagnosis. At surgery a well-demarcated bluish soft tissue swelling was discovered on the radial side of the pulp. Branches of the radial digital nerve were splayed over but separate from the tumour. Excision was performed and histology showed a glomus tumour. The patient is pain-free post-operatively.

Discussion
The glomus body is an arteriovenous anastomosis surrounded by nerve elements that assists in thermoregulation. It is found in the stratum reticularis of the dermis and is present in the subungal and lateral areas of digits and the palm. These are the most common sites for a glomus tumour, although it can occur elsewhere. Discrete lesions with convoluted vessels surrounded by glomus cells in a hyalinised stroma have been described. Glomus tumours are discrete lesions with convoluted vessels surrounded by glomus cells in a hyalinised stroma. While generally benign, some are locally infiltrative and glomangiosarcomata have been described.

Imaging can be useful in diagnosis and in localising the tumour. Bony erosions on plain radiographs may be visible. Artériography showing a telangiectatic lake used to be the method of choice for diagnosis and localisation, but is invasive. Currently ultrasound and MRI are more popular imaging modalities. Ultrasonography shows a hypoechoic hypervascular nodule, and can depict nodules as small as 3mm in diameter. MRI is an excellent non-invasive imaging tool for evaluation of the soft tissues. The tumour can be iso- or hypointense on T1-weighted images and strongly hypointense on T2-weighted images. Contrast can also be helpful in delineating the tumour, for our patient accurately localised the tumour, but could not distinguish a plane between the digital nerve and the mass, leading to the initial diagnosis of a neuroma, especially in light of the patients history of injury. Other potential diagnoses include a digital mucous cyst and vascular lesions such as haemangiomata and angiomata. Treatment consists of complete surgical excision. The MRI images obtained for our patient accurately localised the tumour, but could not distinguish a plane between the digital nerve and the mass, leading to the initial diagnosis of a neuroma, especially in light of the patients history of injury. Other potential diagnoses include a digital mucous cyst and vascular lesions such as haemangiomata and angiomata. Treatment consists of complete surgical excision. Symptoms usually resolve post excision. In conclusion, glomus tumours can be present for many years before the diagnosis is made. Careful history-taking and examination is advocated and imaging may help in establishing the diagnosis. The diagnosis of glomus tumour should be considered in cases of temperature sensitivity and localised pain, particularly in the fingertip.
References