

## Interest of MRI in the Diagnosis of Glomus Tumors with Review of the Literature

Laachir Ghizlene

Department of Neuroradiology Diagnostic and Interventional Cheikh Zayed University Hospital in Rabat Morocco, Abulcasis International University of Health Sciences - UIASS

### ARTICLE INFO

#### Article history:

Received: 20 July 2021;

Received in revised form:  
16 August 2021;

Accepted: 26 August 2021;

#### Keywords

Glomus Digital Tumors,  
Magnetic Resonance Imaging.

### ABSTRACT

Glomus tumors are rare benign tumors, they represent 1 to 4.5% of hand tumors developing from Masson's glomus, a neuromyo-vascular structure of the body that participates in thermal regulation. Delay in diagnosis is frequent, because this tumor can't give an elementary lesion, and only manifest itself by a throbbing paroxysmal pain, which misleads the practitioners, thus referring the patients in psychiatry. The definitive diagnosis is based on the pathological examination. The aim of our retrospective study was to assess the value of MRI in the diagnostic management of digital glomus tumors.

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### Introduction

Glomus tumors are rare benign tumors, they represent 1 to 4.5% of hand tumors developing from Masson's glomus, a neuromyo-vascular structure of the body that participates in thermal regulation. Delay in diagnosis is frequent, because this tumor can't give an elementary lesion, and only manifest itself by a throbbing paroxysmal pain, which misleads the practitioners, thus referring the patients in psychiatry. The definitive diagnosis is based on the pathological examination. The aim of our retrospective study was to assess the value of MRI in the diagnostic management of digital glomus tumors.

#### Goal

The goal is to assess the interest of MRI in the diagnostic management of glomus digital tumours. A review of the literature of digital glomus tumours.

#### Methods

This series is a retrospective review of 15 cases with glomus tumors, collected within our department over a period of four years (2018-2021), the female sex was predominant (70%), the average age was 35 years. The most common reason for consultation was severe, sudden pain, with a bluish or reddish spot on clinical examination associated with nail dystrophy. All patients received preoperative imaging; MRI in high resolution and after contrast injection.

#### Results

Glomus tumours are rare benign tumours, representing 1-4.5% of hand tumours that develop from the Masson's glomus. Diagnostic delay is common, as this tumour may not cause elementary lesion, and may only manifest itself in paroxysmal lancinating pain, leading practitioners to be misled, thus addressing psychiatric patients. The diagnosis of certainty is based on anatomopathological examination. The purpose of our retrospective study was to assess the interest of MRI in the diagnostic management of glomus digital tumors.

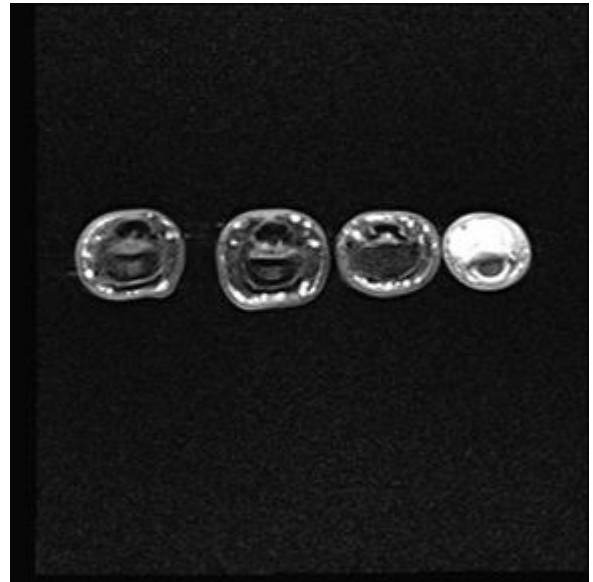
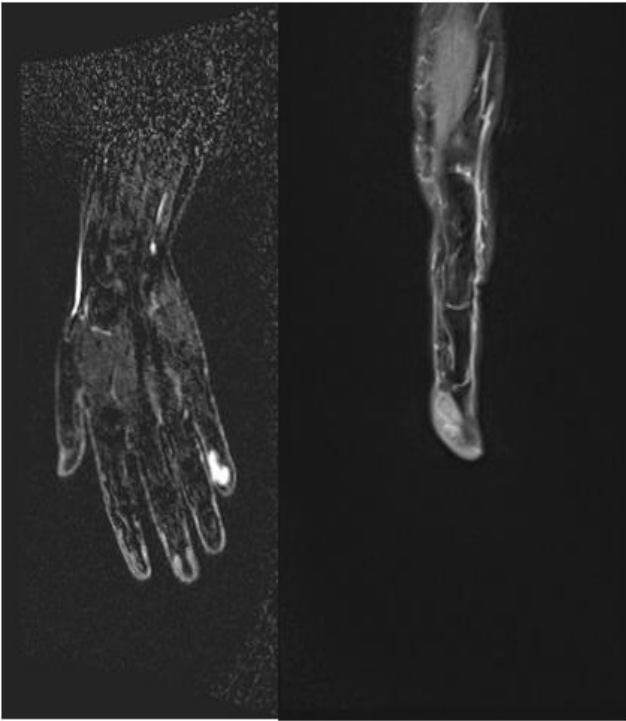
### Discussion

Glomus tumours are rare, benign, vascular neoplasms arising from glomus body which is a contractile neuromyoarterial structure found in the reticular dermis. Glomus body consists of afferent arteriole, anastomotic vessel known as Sucquet-Hoyer canal, primary collecting vein, intraglomerular reticulum, and capsular portion. Although this tumour can be found anywhere on the body, most common site of its occurrence is distal phalanx of the fingers, especially in the subungual region. Though this is true in case of female population, males often have these tumours in other parts of the body.

#### Conclusion

Glomus digital tumors are often confusing due to their rarity, MRI appears to be a promising method for detection, but above all for the topographic and morphological assessment of the lesion, which can easily lead to surgery.

Differential diagnosis of glomus tumour should always be kept in mind along with other lesions such as haemangioma, neuroma, osteochondroma, or mucous cyst while evaluating a patient with severe pain in the tip of the finger.



MRI of the left hand in a 30-year-old patient performed in T1 Fatsat sequences after injection of gadolinium showing a glomus tumor of the 5th finger.