**Volume 21 Number 4**
**April 2015**

**Letter**

# Nd:YAG laser offers promising treatment option for familial glomuvenous malformation

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**Dermatology Online Journal 21 (4): 13**

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## Abstract

Although an uncommon entity, familial glomangiomatosis is often a source of significant discomfort to affected patients and impacts quality of life. Patients develop numerous painful vascular lesions, beginning in childhood. Because management strategies for this entity are sparsely reported in the literature, additional study is needed to establish best practice. We report positive results with the use of Nd:YAG laser in treating symptomatic lesions of familial glomuvenous malformation

**Keywords: ND:YAG, glomangiomatosis, glomuvenous**

## Introduction

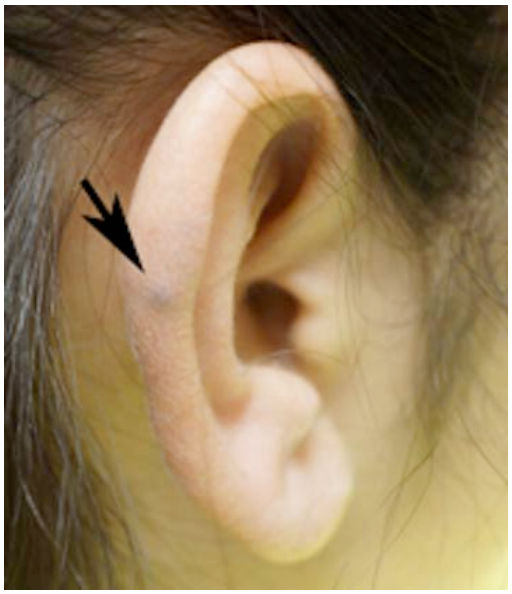
Familial glomuvenous malformation (glomangiomatosis) is a rare, non-malignant vascular disorder primarily involving the skin and subcutis. Affected patients develop numerous painful vascular lesions, beginning in childhood [1]. Because management strategies for this entity are sparsely reported in the literature, additional study is needed to establish best practice. We recently encountered positive results with the use of Nd:YAG laser in treating symptomatic lesions of familial glomuvenous malformation.

## Case synopsis

A 22 year-old-woman presented to our clinic with multiple solitary soft, blue subcutaneous papules and nodules on the right helix, arms, legs, and trunk. Her condition had been present since early childhood with gradual subsequent expansion in size and number of lesions. By report, numerous first and second-degree relatives had similar nodules. She reported exquisite tenderness to minimal pressure in the right helical and left arm papules.

A review of previous excision histology specimens revealed dilated vascular spaces surrounded by one to two layers of uniform eosinophilic cuboidal cells, consistent with a diagnosis of glomangioma. Thrombosis was evident in some vascular spaces, likely accounting for her reported tenderness. Given the histopathological findings and history, the diagnosis of familial glomuvenous malformation was made [1].

After discussion of management options, the patient elected for Nd:YAG laser treatment of her most tender lesions on the right helix and left arm. She underwent two separate Nd:YAG treatments, separated by 5 weeks.



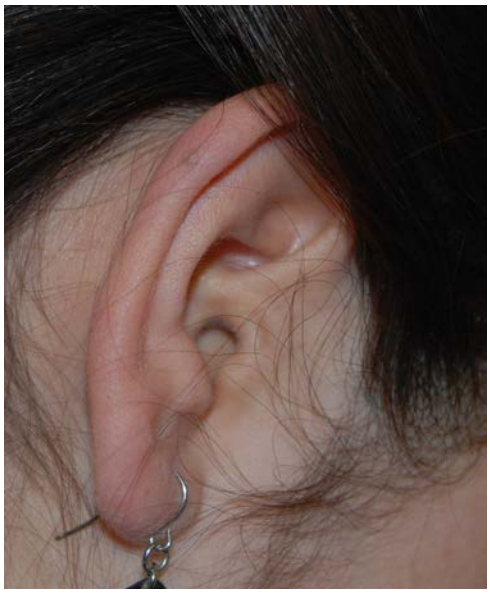


**Figure 1.** Painful lesion on the helix, pre-treatment. **Figure 2.** Lesion, post-treatment with Nd:YAG laser. Note the slight post-inflammatory hyperpigmentation

Laser spot size was 3 millimeters with a 40 millisecond pulse width. For the arm, 5 pulses were delivered at a power of 240 joules/$cm^2$ at both sessions. For the helix, 5 pulses were delivered at a power of 200 joules/$cm^2$ at both sessions.

Reduction in lesion size and tenderness was evident after the first treatment. Resolution of tenderness was noted after her second treatment, accompanied by mild post-inflammatory hyperpigmentation. At one year post-treatment, there is no clinical sign of recurrence and the sites provide her no discomfort.

## Discussion

Although an uncommon entity, familial glomangiomatosis is often a source of significant discomfort to affected patients and impacts quality of life. The condition results from of a mutation in the glomulin gene and it is inherited in an autosomal dominant fashion with incomplete penetrance and variable expression [1]. Glomangiomas are typically present at birth and steadily progress thereafter. Exquisite tenderness often results from thrombotic occlusion. Unlike other inherited venous disorders, the internal organs are typically uninvolved.

Histopathology characteristically demonstrates a variable number of mural glomus cells in distended venous channels, similar to solitary glomangiomas.

Information regarding treatment options for symptomatic glomuvenous malformations is limited. Although excision is reported in the literature, it may result in unsatisfactory scars in cosmetically sensitive areas. Excising all bothersome tumors may not be feasible. Nd:YAG laser ablation and sclerotherapy with sodium tetradecyl sulphate have both been reported as alternatives to surgery [2,3,4,5]. Given the diffuse nature of familial glomuvenous malformation, Nd:YAG laser therapy appears to offer an effective, well-tolerated, and minimally invasive option for addressing symptomatic lesions.

## References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