

## Cavernous hemangioma: a term to be canceled

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Received: 11 August 2016 / Accepted: 26 September 2016  
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Dear Sir,

There is a growing body of literature concerning the intranasal endoscopic approach to orbital diseases. We agree on the reasons behind the choice to approach the medial orbit endonasally insofar as we have recently published a method to manage medial wall fractures [1].

It appears that one of the most frequent reasons to approach the orbit transnasally is to remove a “cavernous hemangioma” (CH) and recent papers describe CH as a tumor.

Hooper in 1828 clarified that the suffix “-oma” should be used for tumors only [2].

A landmark paper from Mulliken and Glowacki [3] demonstrated that vascular anomalies are divided in tumors and malformations based on their histological features: tumors have cells that possess an intrinsic anomalous turnover rate while malformations do not. The most frequent among vascular tumors is Infantile Hemangioma which is the most common tumor of infancy and inherently tends to regress at around 3–5 years.

ISSVA, the International Society for the Study of Vascular Anomalies has proposed a classification that has been unanimously accepted [4]. This divides Tumors (benign, borderline, and malignant) from Malformations (Simple: Capillary, Lymphatic, Venous, Arteriovenous Malformations, Arteriovenous Fistula; Combined; Of Major Named Vessels; Associated with other Anomalies).

Thus, the suffix -oma should never be used to describe vascular malformations.

Nevertheless, many Authors still refer to “cavernous hemangioma”.

To be correct, the term should indicate a tumor. Are cavernous hemangioma tumors? No. In a recent research Rootman et al. [5] have demonstrated that CHs are non-infiltrating, focal venous malformations. They lack hyperplasia, that is, the cell turnover rate is not altered and they grow (when they do it, by an average 10 % per year) owing to phenomena of localized intravascular coagulation (LIC) and subsequent inflammation [6]. Just like other Puig Type I venous malformations, they are (almost) excluded from the general circulation [7].

Is this just academia? Again, no. Since isolated venous malformations of the orbit are not tumors, indications for surgery and, especially, the related informed consent must take this into consideration. Only those malformations presenting clear symptoms, like reduction in visual acuity and/or diplopia should be managed surgically. Another, less agreed on, indication is morphologically significant exophthalmos. Small, asymptomatic malformations, especially those located intraconally, can be just observed over time. Nonsurgical measures such as low molecular weight heparin could be used to stem episodes of LIC [6].

Thus we believe that the term “cavernous hemangioma” should be canceled and replaced by Venous Malformation of the Orbit.

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