CASE REPORT

A rare intramuscular hemangioma - case report

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Abstract Intramuscular hemangiomas are rare, slow growing, angiomatous tumors, generally asymptomatic, and rarely presenting with complications. We report a rare case of a Hemangioma of the Flexor Digitorum Superficialis in a 13-year-old boy, present since birth and with extensive involvement, necessitating excision of the muscle. The patient is presently doing well, barring minimal weakness in finger flexion.

Keywords Hemangioma · Intramuscular · Flexor digitorum superficialis

Introduction

While hemangiomas are common angiomatous soft tissue tumors, intra muscular hemangiomas are rare, constituting only 0.8% of all hemangiomas.

Thought to be either congenital or preceded by trauma, these benign neoplasms generally present as slow growing swellings which maybe associated with pain. The absence of the tell tale signs of a vascular tumor such as bruit and thrill often causes the condition to be misdiagnosed. We had a 13-year-old boy, presenting with a swelling in the forearm since birth. MRA helped diagnose an intra-muscular hemangioma. Intra-operatively, it was found that there was extensive involvement of the muscle, which was excised.

Case report

A thirteen-year-old boy presented with a swelling over the right forearm. The painless swelling had been present since birth and had gradually increased in size. There was no history of trauma to the site. On examination, there was an ill-defined swelling on the flexor aspect of his right forearm, oval, with ill-defined borders, measuring six centimeters by three centimeters, compressible and negative for the 'slip-sign.' The swelling became less prominent on flexing the wrist and fingers.

The patient was admitted with a pre-operative diagnosis of hemangioma, which was confirmed by MR Angiography. Excision of the hemangioma was planned. On exploration an intramuscular hemangioma was found in the right forearm in the flexor digitorum superficialis. Multiple extensive hemangiomatous tissue extending proximally and distally was identified. (Fig. 1) The muscle tissue with the contained hemangioma was isolated and dissected. The Ulnar nerve,

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Fig. 1 The Intra-muscular hemangioma

the median nerve and the ulnar artery were identified and separated from the hemangiomatous mass. In view of the extensive intramuscular involvement of the hemangioma, it was decided to excise the entire muscle mass with the contained hemangioma in consult with orthopedic surgeon. The post-operative period was uneventful except for minimal weakness in finger flexion. Histology reported an intra muscular angiomatous lesion.

Discussion

The word hemangioma comes from the Latin words 'hemangio' meaning blood vessel and 'oma' meaning tumor. Soft tissue hemangiomas are common neoplasms of benign histological origin. Depending on the predominant type of vascular channel identified, they are classified as capillary, cavernous or arterio-venous [1, 2]. They are the most common of the angiomatous lesions and represent up to 7% of all benign soft tissue tumors [3]. Women are more commonly affected than men. Our patient was a young 13-year-old boy.

The first documentation of an intra-muscular hemangioma is attributed to Liston in 1843 [4]. Intra muscular hemangiomas are rare tumors constituting less than 1% of all hemangiomas [5, 6]. While there is history of trauma in a sizeable population of patients, it is generally considered a congenital condition [7]. The tumor may be detected in patients aged anywhere between two months to 66 years, however, 80–90% present in patients aged less than 30 years [4].

The most common presentation is one of a swelling, present since birth (as was the case in our patient) or appearing following trauma at the site, which gradually increases in size. It may be painful. However, pulsations, bruit and thrill—the hallmark of vascular lesions is absent, accounting for the high incidence of mis-diagnoses. There may be discoloration of the overlying skin and exercise aggravates the symptoms

of pain and swelling due to increased blood flow through the mass [4]. A very large intra-muscular hemangioma may, rarely, lead to congestive heart failure by creating a very large arterio-venous shunt [4]. A case of cavernous hemangioma of the flexor digitorum superficialis, presenting clinically as a Volkmann's contracture has also been reported. (by Dr. T.M Sunil, Indian Pediatrics, Volume 41, March 17-2004)

Rarely, hemangiomas may also be associated with other pathologic processes such as the Kasabach-Merritt syndrome (a consumptive coagulopathy associated with soft tissue hemangiomas) [4].

Except the swelling over his right forearm, our patient had no symptoms. X-rays may show an intra-muscular hemangioma as a soft tissue shadow with an occasional phlebolith. Magnetic resonance imaging is the current standard for diagnosing soft tissue hemangiomas [1–3, 9]. Arteriography may be useful if embolisation is being considered. Biopsies are rarely warranted.

En-bloc resection of the tumor with the muscle involved is now the treatment of choice, since sclerotherapy and embolotherapy have proven ineffective [7, 8]. We chose to excise the entire flexor digitorum superficialis since it had been extensively involved by the hemangioma. Sclerotherapy and embolotherapy may, however, prove useful, if performed preoperatively, by limiting blood loss during the resection of the tumor and muscle.

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