BRACHIAL ARTERY PSEUDOANEURYSM SECONDARY TO A SESSILE OSTEOCHONDROMA IN AN AVID TEENAGE BASKETBALL PLAYER

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Purpose: Osteochondromas (OCE) are typically characterized as benign cartilaginous neoplasms occurring either in isolation or as part of multiple hereditary exostosis. In some instances, they may cause pain due to irritation of the nearby musculoskeletal structures such as ligaments, tendons, nerves, and vessels. Most often, growth of these lesions is slow and mimics skeletal growth. Rapid change in the size of a lesion is a cause for investigation and concern for malignant transformation. Presented here is the case of a 17-year-old male who noted rapid ongoing growth in a humeral OCE secondary to development of a brachial artery pseudoaneurysm.

Methods: 17-year-old male avid basketball player with a history of MHE who is status post resection of lesions about his knee. He reported a one year history of significant and progressive growth of a lesion in his right medial upper arm associated with mechanical pain with movement (especially with basketball activities), night pain, and occasional numbness. His physical exam revealed a large firm relatively immobile non-pulsatile mass just distal to the axilla without adjacent adenopathy. CT scan revealed a 10 cm mass with subjacent cortical irregularity concerning for a sarcoma with hemorrhage versus pseudoaneurysm. MRI was most suggestive of a pseudoaneurysm with displacement of the neurovascular structures. MRA and CT angiogram confirmed the suspected pseudoaneurysm. He subsequently underwent successful resection and repair of the pseudoaneurysm and resection of the offending exostosis by orthopaedic oncology. His recovery has been unremarkable to date.

Discussion: Vascular complications associated with OCE are rare with around 100 reported in the literature to date. The most common site of location is the popliteal artery, perhaps due to this being a common location for OCEs, trauma and relative tethering of this artery about the knee. The humerus is a decidedly uncommon location despite its large range of motion.

Conclusion: Rapid or ongoing enlarging OCE’s require prompt medical attention and work up. Whereas sarcomatous degeneration needs to always be considered, other etiologies such as pseudoaneurysms need to be included in the differential diagnosis. This case report presents the rare complication of an OCE leading to a pseudoaneurysm of the brachial artery. Recognition of this potential diagnosis aided in appropriate imaging, without a disastrous open or needle biopsy.