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Case Report

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Iatrogenic False Aneurysm of the Common Femoral Artery in infants

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Abstract

False aneurysm, particularly femoral ones, is rare in neonates and infants, and can be complications of percutaneous puncture. We report a case of Common Femoral Artery (CFA) false aneurism in 2 months aged infant. The lesion was surgically resected and arterial continuity restored by closure of deep gap. The postoperative period and follow up were uneventful.

Keywords: Common Femoral Artery; False Aneurysm; Infant

Introduction

False aneurysm of the CFA in infant group is a very rare occurrence [1]. It can be complication of percutaneous puncture. Only a few cases have been reported in neonates, so we consider it appropriate to report a new observation studied recently.

Case Report

A two months aged infant is presented with a pulsatile mass in her left inguinal area. [Figure1] This mass appeared just after birth following femoral artery puncture and progressively increasing diameter. Biological tests reveal anemia with hemoglobin at 9.9g/dl. A possible false aneurysm was suspected, and an ultrasound was done which established the diagnosis of a partial thrombosis false aneurysm of the left CFA measuring 17mm * 21mm. The treatment was surgical and consisted of the flattening of the false aneurysm with closing the gap on the CFA after proximal and distal control of the CFA [Figure2, 3]. The infant was followed regularly for six months after the false aneurysm repair in which the recovery was uneventful.

Figure 1: Photography objectifying the mass in the left inguinal area.

Figure 2: Intraoperative view: False aneurysm of the common femoral artery.

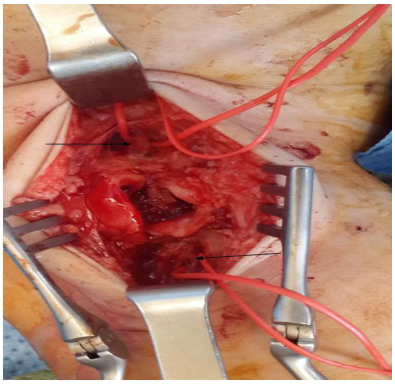

Figure 3: Intraoperative view: flattening of the false aneurysm after proximal and distal control of the CFA.

Discussion

Pediatric vascular trauma is rare, accounting for about 1% of pediatric trauma admissions in one multicenter experience

[2]. The cause of pediatric vascular trauma is age dependent. Iatrogenic injuries are most common during the first 2 years of life [3]. Presently, arterial catheterization procedures remain the most common cause of pediatric vascular injury for which vascular surgeons are confronted [4]. False aneurysm is uncommon in adults and even less common in children. Blunt trauma, penetrating trauma and attempts at vascular access are the most common etiologic factors. The most common etiology in children defined as an arterial complication is peripheral arterial puncture following venepuncture [5]. The diagnosis is suspected in infants who have recently arterial catheterization or puncture and has a large hematoma, the appearance of a systolic-diastolic breath or a pulsatile mass in inguinal area. The diagnosis will definitely pose by ultrasound. Open surgery of all post-puncture false aneurysms is certainly not necessary [6].

Indications were established as a very large aneurysm [7]. Ultrasound monitoring of small lesions and regardless of gravity seems possible in an outpatient setting [7]. Ultrasound-guided compression therapy was first proposed by Fell meth et al [8]. Since that first description, about fifteen studies have used ultrasound-guided compression to treat false aneurysms post-catheterize [9]. The success rate varies from 54% to 100%. Advanced radiological interventions, like Coil embolization, have been successfully used in addition to surgical repair and reconstruction [10,11]. However, in a pediatric age group, percutaneous therapy in femoral arteries is not widely employed because of the extensive expertise required, increased risks and complications related to the procedure [12].

Conclusion

Percutaneous catheterization or venous and arterial punctures may lead to serious vascular complications such as false aneurysm. This phenomenon needs to be readily recognized in order to be promptly diagnosed and successfully treated. Doppler ultrasonography is an excellent and noninvasive method to confirm the presence of a vascular injury.

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