

RARE CASE OF ISOLATED INTERNAL ILIAC ARTERY PSEUDO-ANEURYSM PRESENTING WITH RUPTURE. SUCCESSFUL ANGIOEMBOLIZATION USING COILS AND HISTOACRYL GLUE

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ABSTRACT

We report a case of 65-year-old lady who presented with fever and left flank pain for 35-40 days and was found to have large collection on MRI spine, this was associated with partially thrombosed pseudoaneurysm of left internal iliac artery and deep venous thrombosis of left lower leg vessels which were better appreciated on contrast enhanced CT scan. DVT was managed by inferior vena caval filter as patient could not be anticoagulated and pseudoaneurysm was embolized using coils and glue. Later collection was drained by pigtail catheter placement. Patient responded well and discharged uneventfully.

Introduction

Isolated internal iliac artery pseudoaneurysms are rare, these may progress to rupture. Cause of collection should be sought where possible as catheter placement without embolization could have resulted in loss of tamponade and excessive bleeding.

Successful embolization was performed using coil and histoacryl glue. In third world country with limited recourses, glue is successfully used thus keeping the cost under better control.

Case Presentation

A 65 yrs old woman was admitted in our institution with complaint of left flank pain and fever for last 35-40 days. She was known case of diabetes, hypertension, osteoarthritis and hyperthyroidism. She had blood pressure of 130/60 mm Hg. Heart rate of 90b/min. Respiratory rate of 18 /min and temperature of 99°F. Her MRI and CT scan were performed at other hospital

which showed large loculated fluid collection seen in the left psoas muscle and peri-renal region. It measured 9.6 x 7.8 x 6.4 cms. This was associated with partially thrombosed pseudo aneurysm of left internal iliac artery. DVT in left lower limb was managed by inferior vena caval filter insertion as patient could not be anticoagulated. Other differential in our case may be Psoas abscess leading to pseudoaneurysm formation. However our patient did not have any abnormality in the spine. Collection drained was hemorrhagic and didn't show Acid fast Bacilli on culture. Patient was referred to interventional radiology for endovascular embolization. Through the right femoral artery access, initially left internal iliac arteriogram performed which revealed a pseudo aneurysm arising from its proximal segment, also involving its bifurcation. Initially coils were deployed in the distal segments of the internal iliac artery branches and this was followed by coils in proximal segment. Due to short segment of internal iliac artery at origin deployment of further

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coil was not possible so small amount of histoacryl glue with lipoidal was used to embolize it successfully. This procedure was followed by catheter placement in psoas collection.

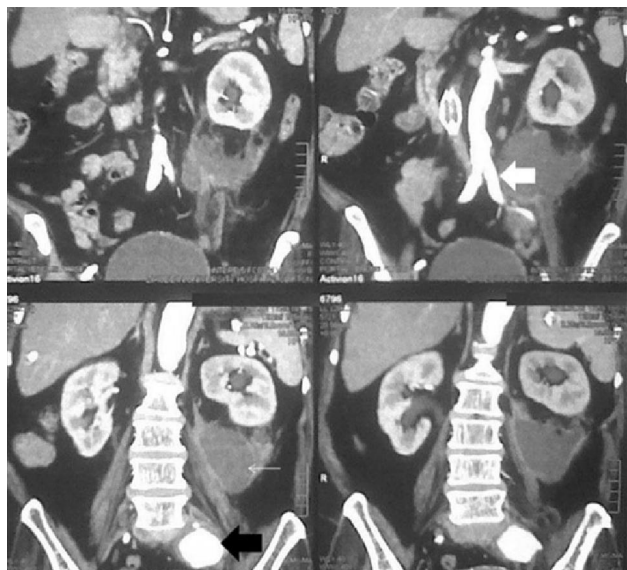


Figure 1: Post Contrast coronal CT images showing pseudoaneurysm from left internal iliac artery (Black arrow). Left common iliac artery (Thick White arrow). Collection (Thin white arrow)



Figure 2: DSA showing catheter tip in left common iliac artery. Pseudoaneurysm arising from internal iliac artery.



Figure 3: Post embolization run showed occlusion of internal iliac artery using coils and glue. IVC filter is noted.

Discussion

Internal iliac artery (IAA) pseudoaneurysms are commonly associated with Abdominal aortic aneurysms. Isolated ones are rare with large autopsy series showing prevalence of 0.008% - 0.03%.^{1,2} Atherosclerosis is the most common cause; other causes include trauma, infection, excessive athletic effort, and connective tissue disorders.³ Natural course of IAA is progressive expansion to rupture. Amongst the infection the; *S. aureus* and streptococcus species seems to be the most common causative agents for IAA.⁴⁻⁸ Treatment options vary from proximal as well as distal coils embolization, coil packing and stenting depending on the origin of aneurysm and anatomy.^{9,10,11} Each coil placement increases the cost of procedure which needs to be restricted many a times in third world countries considering the cost and non-affordability issues. Histoacryl glue needs technical expertise because of liquid nature however a small quantity may suffice to embolize the abnormal vessel effectively and at a low cost.^{12,13}

Conclusion

Isolated pseudoaneurysm of internal iliac artery may occur and present with rupture. Cause of collection should be sought where possible to prevent any

disaster. Alternative methods of embolization should be known.

References

1. Brunkwall J, Hauksson N, Bengtsson H, Bergqvist D, Takolander R, Bergentz SE. Solitary aneurysm of the iliac artery system: an estimate of their frequency of occurrence. *J Vasc Surg* 1989; **10**: 381-4.
2. Lucke B, Rea MH. Studies on aneurysms. *JAMA* 1921; **77**: 935-40.
3. van Sambeek MR, van Urk H. Endovascular treatment of isolated iliac artery aneurysms. *Eur J Vasc Endovasc Surg* 1998; **15**: 91-2.
4. Fillmore AJ, Valentine RJ. Surgical mortality in patients with infected aortic aneurysms. *J Am Coll Surg* 2003; **196**: 435-41.
5. Muller BT, Wegener OR, Grabitz K, Pillny M, Thomas L, Sandmann W. Mycotic aneurysms of the thoracic and abdominal aorta and iliac arteries: Experience with anatomic and extra-anatomic repair in 33 cases. *J Vasc Surg* 2001; **33**: 106-13.
6. Moneta GL, Taylor LM Jr, Yeager RA, Edwards JM, Nicoloff AD, Mc Connell DB, et al. Surgical treatment of infected aortic aneurysm. *Am J Surg* 1998; **175**: 396-9.
7. Reddy DJ, Shepard AD, Evans JR, Wright DJ, Smith RF, Ernst CB. Management of infected aortoiliac aneurysms. *Arch Surg* 1991; **126**: 873-8.
8. Fowler VG Jr, Scheld WM, Bayer AS. Endocarditis and intravascular infections. In: Mandell GL, Bennett JE, Dolin R, eds. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*. 7th ed. Philadelphia, PA: Churchill Livingstone/Elsevier, 2010: 1067-112.
9. Endovascular Treatment of Iliac Artery Aneurysms October 2005 Radio Graphics.
10. Christos Karathanos, Elias Kaperonis, Dimitrios Xanthopoulos, et al., "Endovascular treatment of Isolated Iliac Artery Aneurysms with Anaconda Stent Graft Limb," *Case Reports in Vascular Medicine*, vol. 2013, Article ID 527492, 5 pages, 2013. doi:10.1155/2013/527492
11. N. V. Patel, G. W. Long, Z. F. Cheema, K. Rimar, O. W. Brown, and C. J. Shanley, "Open vs. endovascular repair of isolated iliac artery aneurysms: a 12-year experience," *Journal of Vascular Surgery* 2009; **49(5)**: 1147-53.
12. F. Wolf, C. Loewe, M. Cejna et al., "Endovascular management performed percutaneously of isolated iliac artery aneurysms," *European Journal of Radiology* 2008; **65(3)**: 491-7.
13. Walid A, Haq TU, Sayani R, Rehman ZU, "Embolization with Histoacryl Glue of an Anastomotic Pseudoaneurysm following Surgical Repair of Abdominal Aortic Aneurysm," *Case Reports in Vascular Medicine*, vol. 2013, Article ID 761384, 3 pages, 2013. doi:10.1155/2013/761384