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DROP OF ANKLE BRACHIAL INDEX PREDICTING OUTCOME IN TREATMENT OF POPLITEAL ARTERY ENTRAPMENT SYNDROME

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Statement of the Problem: Intermittent claudication is not a common presentation in young people as they are rarely suffering from chronic lower limb ischemia. Popliteal artery entrapment syndrome (PAES) is one of the main known causes of intermittent claudication and should be considered among this young age group. Most of the reported cases are males and usually present before the age of 45. Different anatomical variations found to explain the abnormal compression on the artery in the popliteal fossa. These include variant medial head of gastrocnemius muscle, muscular slip, popliteus muscle or plantaris muscle as a constricting agent. It can be bilateral up to 34% of cases. Repeated trauma may damage the popliteal artery and lead to stenosis, thrombotic occlusion or post stenotic aneurysmal dilatation. Lack of awareness could lead to delay in diagnosis and complications.

Methodology: The data of this study has been retrospectively collected with review of patients undergoing operative treatment of popliteal artery entrapment syndrome (PAES). Eight patients (11 limbs) presented, diagnosed and surgically treated. All of them were males. Six limbs had PAES on the left side. The age ranged from 21 to 47 years with median age of 31 years. Only one patient was diabetic and two were smokers. Out of the 11 limbs included in our study, three patients had bilateral PAES with unilateral symptoms. The mean duration of symptoms was 12 months and ranged between 3 and 24 months.

Conclusion & Significance: Diagnosing PAES is mainly based on clinical assessment with support of duplex scanning; ankle brachial index (ABI) drop during muscular stress is a good predictor to identify patients benefit from surgical decompression and keeping high threshold to offer surgery for PAES will save patients from inadequate outcome.

Recent Publications

1. Jarraya M, Simmons S, Farber A, Teytelboym O, Naggara N and Guermazi A (2016) Uncommon diseases of the popliteal artery: a pictorial review. *Insights into Imaging* 7(5):679-688.

Case no.	Type	Decompression	Aneurysm	Occlusion	Bypass	Symptom relief	Follow up months
1	I + II	Y	-	Y	Y	Y	30
2	II	Y	-	-	-	Y	29
3	I	Y	-	-	-	Y	14
4	I	Y	-	-	-	Y	22
5	I + II	Y	-	-	-	Y	24
6	IV	Y	-	Y	Y	Y	16
7	I	Y	-	-	-	Y	18
8	III	Y	-	-	-	No	21
9	I	Y	-	-	-	Y	10
10	I	Y	-	-	-	No	6
11	I	-	-	-	-	No	6

Figure 1: Schematic representation of the different SNPs in TLR genes.

2. Lejay A, Delay C, Georg Y, Gaertner S, Ohana M, Thaveau F, Lee J T, Geny B and Chakfe N (2016) Five year outcome of surgical treatment for popliteal artery entrapment syndrome. *Eur J Vasc Endovasc Surg.* 51(4):557-64.
3. Bonasia D E, Rosso F, Cottino U and Rossi R (2015) Exercise-induced leg pain. *Asia-Pacific Journal of Sports Medicine, Arthroscopy, Rehabilitation and Technology.* 2(3):73-84.
4. Kim S Y, Min S K, Ahn S, Min S I, Ha J and Kim S J (2012) Long-term outcomes after revascularization for advanced popliteal artery entrapment syndrome with segmental arterial occlusion. *J Vasc Surg.* 55(1):90-7.
5. Sinha S, Houghton J, Holt P J, Thompson M M, Loftus I M and Hinchliffe R J (2012) Popliteal entrapment syndrome. *J Vasc Surg.* 55(1):252-262.

Biography

Hussien Rabee, MBBCh, MSc,FRCS, PHD. Consultant Vascular Surgery in Countess of Chester Hospital (2015-2018). Associate Professor & Consultant Vascular Surgery, College of Medicine, Riyadh, Saudi Arabia (1998-2014). Founder of Vascular Surgery Training Program, Head of Vascular Surgery unit & Animal Lab. Author and Co-author in different researches in Vascular Surgery.

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