



Relationship between ankle brachial index and arterial remodeling in pseudoxanthoma elasticum

Submitted by Emmanuel Lemoine on Wed, 12/11/2013 - 17:08

Titre	Relationship between ankle brachial index and arterial remodeling in pseudoxanthoma elasticum
Type de publication	Article de revue
Auteur	Lefthériotis, Georges [1], Abraham, Pierre [2], Le Corre, Yannick [3], Le Saux, Olivier [4], Henrion, Daniel [5], Ducluzeau-Fieloux, Pierre-Henri [6], Prunier, Fabrice [7], Martin, Ludovic [8]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2011
Date	2011/11
Numéro	5
Pagination	1390 - 1394
Volume	54
Titre de la revue	Journal of Vascular Surgery
ISSN	0741-5214

Résumé en anglais

Objectives Pseudoxanthoma elasticum (PXE) is an inherited metabolic disease characterized by elastic fiber fragmentation and calcification in the cutaneous, ophthalmologic, and vascular tissues. Cardiovascular manifestations such as peripheral arterial disease (PAD) are frequent in PXE. Because of the changes in the elastic properties and medial calcification of the arterial wall in PXE, the impact of the arterial remodeling on the ankle brachial index (ABI), a well-established diagnostic method for the detection and follow-up of PAD, remains to be determined in this disease. **Methods** This was a cross-sectional, comparative, open study, which took place at the PXE Consultation Center, University Hospital of Angers. The subjects were 53 patients (mean age, 49 ± 14 years; 35 females) with PXE clinically proven on the basis of established criteria (skin changes, angioid streaks, and skin biopsy). The ABI at rest, symptoms of intermittent claudication (IC), carotid intima-media thickness (IMT), carotid-femoral pulse wave velocity (c-f PWV), compliance (CC), and β stiffness index were measured in a single-center cohort. **Results** Forty-five percent of the PXE patients had an ABI ≤ 0.90 , but only one patient had an ABI > 1.40 . IC was found in 23% of the patients with an ABI ≤ 0.90 . There were no significant differences between the patients with a low and normal ABI in terms of IMT ($P = .566$) or β stiffness index ($P = .194$), but differences were significant for c-f PWV ($P = .010$) and CC ($P = .011$). Adjusted multivariate linear regression for the Framingham-Laurier score showed that patients with a low ABI had less compliant carotid arteries ($B = 0.318$, $P = .039$). **Conclusions** PAD detected by a low ABI is very frequent in PXE, although with limited prevalence of symptomatic claudication. Unexpectedly, ABI was low in such calcifying PAD and associated with lower CC, independently of atherosclerosis risk factors. These findings demonstrate that PXE represents a unique monogenic model of PAD in which the specific arterial wall remodeling could change the diagnostic value of the ABI to detect PAD.

URL de la notice <http://okina.univ-angers.fr/publications/ua304> [9]
DOI 10.1016/j.jvs.2011.04.041 [10]
Lien vers le document <http://dx.doi.org/10.1016/j.jvs.2011.04.041> [10]

Liens

- [1] <http://okina.univ-angers.fr/g.lefther/publications>
- [2] <http://okina.univ-angers.fr/pierre.abraham/publications>
- [3] [http://okina.univ-angers.fr/publications?f\[author\]=986](http://okina.univ-angers.fr/publications?f[author]=986)
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=987](http://okina.univ-angers.fr/publications?f[author]=987)
- [5] <http://okina.univ-angers.fr/d.henrion/publications>
- [6] <http://okina.univ-angers.fr/p.ducluzeau/publications>
- [7] <http://okina.univ-angers.fr/f.prunier/publications>
- [8] <http://okina.univ-angers.fr/ludovic.martin/publications>
- [9] <http://okina.univ-angers.fr/publications/ua304>
- [10] <http://dx.doi.org/10.1016/j.jvs.2011.04.041>

Publié sur *Okina* (<http://okina.univ-angers.fr>)