

Monckeberg's Arteriosclerosis in Uterine Vessels: An Unusual Presentation

Lucksom Pesona · Kharka Latha · Sebastian Nikhil ·
Gupta Amlan

Received: 21 May 2012 / Accepted: 23 September 2012 / Published online: 12 April 2013
© Federation of Obstetric & Gynecological Societies of India 2013

Monckeberg's arteriosclerosis is a degenerative and non-inflammatory disease involving the media of small and medium-sized muscular arteries. Calcium deposits form in the middle layer of the walls of medium-sized vessels, and these vessels become calcified independently of atherosclerosis. It is more common in people over 50 years of age and is commonly found in the peripheral arteries causing "pipestem" arteries. It can easily be seen as an opaque vessel on normal X-rays and purple material on histologic slides (Fig. 1). Involvement of the uterine vessels is very rare. We would like to report the occurrence of this sclerosis in uterine vessels in an utero-vaginal prolapse.

A 70-year-old woman presented to our OPD with a complaint of something coming out per vagina for the last 20 years. She has three children, all delivered vaginally and at home. She attained menopause at the age of 49. In the beginning, this mass was less and reduced on lying down, but as time elapsed, it started to increase and needed

manual reduction for urination and defecation. On examination, there was a mass coming out per vagina with the presence of keratinization and pigmentation over it. Palpation over the mass showed that it was a procidentia (Fig. 2) with cystocele, rectocele, and decubitus ulcer. Her general condition was good. Other than mild hypertension detected during pre-anesthetic checkup, she had no other complications. A vaginal hysterectomy with pelvic floor repair was done on December 9, 2011. Uterus was small with elongated cervix due to the prolapse. The resected mass was sent for histopathologic examination. Histopathology report showed the presence of chronic cervicitis, atrophic endometrium, and medial calcific sclerosis in the uterine vessels (Monckeberg's arteriosclerosis) (Fig. 1).

It is, however, a benign condition as it does not involve the intimal layer of the artery, and the lumen is kept open by the rigid media. It commonly occurs in peripheral arteries of the lower limbs. Involvement of uterine vessel is very rare. The exact etiopathogenesis of this process is yet to be understood. Recent studies, however, have demonstrated that MS is a risk factor for cardiovascular disease and peripheral artery obstruction [1]. Shanahan et al. [2] proposed that a loss of expression of certain proteins, such as Gla protein, osteoprotegerin, fibrillin I, and carbonic anhydrase (all produced by vascular smooth muscle cells), related to the inhibition of calcification, could be the causative factor. Byts et al. [3] pointed out that medial calcification can be a consequence of various metabolic changes triggered by a necrobiotic injury installed in the vessel wall.

Lucksom P. (✉), Assistant Professor ·
Kharka L., Assistant Professor · Sebastian N., Junior Resident
Department of Obstetrics and Gynaecology, Sikkim Manipal
Institute of Medical Sciences, 5th mile, Tadong, Sikkim, India
e-mail: pesonadoc@gmail.com

Gupta A., Professor
Department of Pathology, Sikkim Manipal Institute of Medical
Sciences, 5th mile, Tadong, Sikkim, India

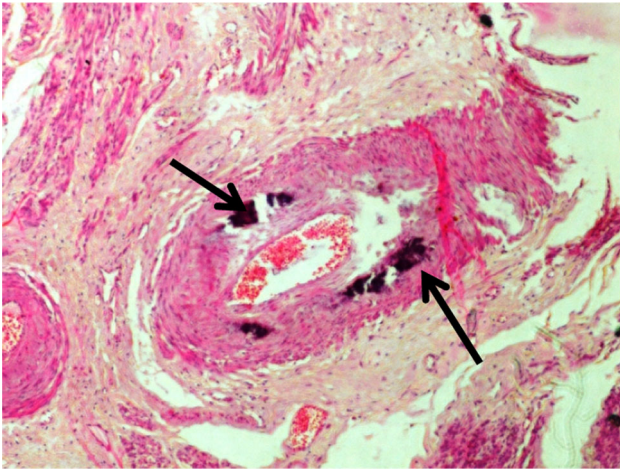


Fig. 1 Histology showing areas of sclerosis



Fig. 2 Utero-vaginal prolapse

Acknowledgments The authors thank the Department of Pathology of Sikkim Manipal Institute of Medical Sciences for extending them all the necessary help regarding the histopathologic report and the picture, as well as the OBG staff for their support.

Conflict of interest There have been no conflicts of interest.

References

1. Lehto S, Niskanen L, Suhonen M, et al. Medial artery calcification: a neglected harbinger of cardiovascular complications in non-insulin dependent diabetes mellitus. *Arterioscler Thromb Vasc Biol.* 1996;16(8):978–83.
2. Shanahan C, Cary NRB, Salisbury JR, et al. Medial localization of mineralization-regulating proteins in association with Mönckeberg sclerosis. *Circulation.* 1999;100:2168–76.
3. Byts IU, Holdobina VIE, Dudko MO, et al. The current concepts of the pathogenesis of Monckeberg-type arteriosclerosis. *Fiziol Zh.* 2000;46:64–72.