



Histopathological Characteristics of Chronic Arterial Occlusive Diseases in Bangladesh

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Editorial

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Editorial

Arterial occlusive disease is very common in advanced countries and also not uncommon in developing countries like Bangladesh. This disease accounts for morbidity and mortality of patients with vascular pathology. There are two varieties of arterial occlusive diseases- Chronic and acute arterial occlusive disease. Among these, chronic arterial occlusive disease (CAOD) has received less attention. However, the use of simple non-invasive diagnostic techniques in recent years has allowed identification of asymptomatic CAOD and shown that the prevalence of the diseases is several fold higher than previously estimated- 3% in those below 60 years, and to over 20% at 75+ years. CAOD is associated with a relative risk of 4 to 5 times for all causes of mortality. In about 25% of those with CAOD, the disease progresses over time and leads to loss of mobility, gangrene or amputation and death.

Arterial vascular disease is usually due to aging process and traditional risk factors related to atherosclerosis and obliterative endarteritis. However, Thromboangitis Obliterans (Burger's disease), vasculitis and other uncommon non-inflammatory arteriopathies and degenerative lesions such as aneurysms, requiring specific diagnostic evaluation and treatment which can present with both ischemic symptoms from occlusive diseases. Duplex ultrasound study of arterial system and serum lipid profile are the main investigations to diagnose CAOD. Selective arteriogram of the affected limb

may also be done in some selected patients for the diagnosis. In our study, most common histopathological pattern of chronic arterial occlusive disease was atherosclerotic plaque (82.8%) and fibrosis (75.9%), thrombosis (75.9%), chronic inflammatory cells (72.4%) and acute inflammatory cells (13.7%). Calcification was common in peripheral arteries and the vast majority of this was medial wall of arteries. The internal elastic lamina was frequently involved, which has been observed in other arteries. As in previous studies, this was considered medial calcification because it usually occurred in the absence of atheromatous changes or calcification in the intima.

This histological analysis of lower extremity amputation for chronic PAD indicates that, the principal arterial lesions are non-atheromatous intimal thickening and medial calcification. This indicates that obliterative endarteritis is distinctly different from the atherosclerotic process described in other arteries, which may have important pathophysiologic and therapeutic implications. The abundance of medial calcification provides additional, even though indirect, evidence for a pathogenic role in critical limb ischemia. In conclusion, Atherosclerosis is not the only cause of chronic arterial occlusive disease- Obliterative endarteritis also plays a significant role in Chronic arterial occlusive disease in Bangladesh.

