**HIGH PREVALENCE OF INTERNAL ELASTIC LAMINA CALCIFICATION IN AN ELDERLY POPULATION: A CADAVERIC STUDY**

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**Objective:**The objective of this study was to examine the prevalence of medial, internal elastic lamina (IEL), and intimal calcification in an elderly population.

**Background**: Arteriosclerosis is a vascular disease that contributes significantly to cardiovascular mortality. The sclerosis or hardening of the arteries is thought to occur due to calcification and fibrosis. Calcification can initiate in the IEL and expanded into the medial and intimal layers (Fishbein & Fishbein, 2009). We have recently observed this phenomenon in multiple vascular beds in a mouse model (Savinov, 2015), and also noted that primary calcification of coronary arteries can accelerate coronary artery atherosclerosis in mice (Romanelli, 2017). The prevalence and pathophysiological significance of IEL calcification in human populations is remaining to be investigated.

**Methods and Results:** Calcification was examined in the marginal artery of the colon in 40 cadavers (33% males, ages 57-100). Alizarin red staining was used to enhance the sensitivity and specificity of detection of calcium. Six sections per sample were examined; two independent observers graded all samples. Overall prevalence of calcification was 80% (32 cases). Calcification was present in all layers (media, IEL, intimal). IEL calcification was present in 70% of subjects; 62.5% of subjects presented with medial calcification; intimal calcification was detected in 35% of subjects. Isolated observation of IEL calcification was present in 4 cases (12.5% of all cases). Calcification was found in all three layers in 11 cases (34%). Calcifications in the medial layer and IEL was simultaneously detected in 22 cases (69%) and the intimal layer and IEL calcification co-existed in 13 cases (41%).

**Conclusions:**Overall, IEL is the most prevalent location of calcification in the elderly population. It can be detected individually or simultaneously with other layers of the artery. Further investigation of the pathophysiological involvement of IEL should be considered.