

Abstract

This study examined the characteristics of vertebral artery hypoplasia in 346 arteries of adult black Kenyans. The circumference was measured on haematoxylin/eosin stained microscopic sections of the distal one-third of the intracranial vertebral arteries using scion image analyser. Internal diameter was calculated in millimetre. Data were analysed using SPSS version 16.0. Vertebral artery hypoplasia (diameter < 2.0 mm) occurred in 100 (28.9%) arteries. Sixty of these (17.3%) were on the left and 40 (11.6%) on the right. Sixty (17.3%) were in females while 40 (11.6%) were in males. The side and gender differences were statistically significant at confidence interval of 95%. Frequency of vertebral artery hypoplasia was higher than in most other populations studied. The condition differs from that in other populations because it is more common on the left side and in females. We recommend ultrasound, angio-CT, or angio-MRI evaluation of vertebral arterial system before diagnostic or interventional procedures on posterior circulation.