PP-07: Variations in the infrainguinal anatomical distribution of critical limb ischemia according to digital subtraction angiography

A. G. A. V. J. Abeysinghe, M. R. N. Cassim, C. M. Gurusinghe
Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka

Introduction: Chronic limb threatening ischemia is a global burden that results in death, amputation and impairment in the quality of life. It is caused by atherosclerosis of the limb vasculature with one-year mortality rates ranging from 10-40%. Digital subtraction angiography (DSA) and subsequent angioplasty are minimally invasive procedures that are currently accepted due to improved outcome and lower rates of complications. The aim of this study was to describe the anatomical distribution of critical limb ischemia.

Methods: A retrospective study was done in a single unit, inclusive of 97 patients who underwent angiography and subsequent angioplasty between February 2021-June 2022. Following the procedure, DSA reporting was done by a vascular surgeon and recorded. SPSS was used to analyse data.

Results: Among the 97 participants 71% (n=69) were males. 96% (n=93) had diabetes, 76.3% (n=74) were hypertensive and 50.5% (n=49) had a history of ischemic heart disease. 50.5% (n=49) angiograms were done in the left limb. Of the total study population, 66% (n=64) had patency in the superficial femoral artery and 64% (n=62) had the popliteal artery patent. Tibio-peroneal trunk was patent in 66% (n=64). Anterior tibial artery was patent in 19.6% (n=19) and the posterior tibial was patent in 20.6% (n=20) participants. Of 69 male participants, 69.5% and 15.9% had patency in the superficial femoral artery and anterior tibial artery, respectively. Females had 57% of patency rates in the superficial femoral artery and almost double rates of patency (28.5%) than males in the anterior tibial artery ($p>0.05$).

Conclusions: Majority had patency in the superficial femoral artery than anterior tibial artery. Females had a higher rate of patency in the anterior tibial artery but lower rates in the superficial femoral artery when compared to males.

Keywords: angiography, patency, infra-inguinal