3 - Clinical Anatomy

OC-085 - (23971) - INVESTIGATION OF THE BRANCHING PATTERNS OF THE DORSALIS PEDIS ARTERY

O. Modisane (South Africa)[2]; Z. Tshabalala (South Africa)[1]; J. Myburgh (South Africa)[2]; J. Naicker (South Africa)[2]; N. Mogale (South Africa)[2]

1 - Nelson Mandela University; 2 - University of Pretoria

Obakeng Modisane
Pretoria

Zithulele Tshabalala
Gqeberha

Jolandie Myburgh
Pretoria

Jade Naicker
Pretoria

Nkhensani Mogale
Pretoria

The authors have no conflicts of interest to declare.

The dorsalis pedis artery (DPA) has reported variations of its anatomy. These variations may lead to complications during surgical procedures and misdiagnoses of vascular conditions of the foot. Literature describes the course of the DPA as a continuation from the anterior tibial artery at the ankle joint, becoming the primary blood supply of the dorsum of the foot. The DPA is used to assess the strength of peripheral blood circulation in the leg and the foot through palpation of the pedal pulse. Furthermore, it may be utilised in surgical procedures in treatment of diabetic patients, using it as a flap for bypass grafts.

Dissection of 200 feet was conducted for the study. The anatomy of the DPA was investigated based on its branching patterns and its location relative to the ankle joint. Furthermore, it was classified into categories as described by Kulkarni and Ramesh (2012).
In 147 feet, 11.56% (n = 17) of the DPA was observed to have the commonly described branching pattern in literature. Further, there were 14 variations (A-N) that were observed. For the location of the DPA at the ankle joint, the mean distance from the origin of the DPA to the lateral malleolus was 47.19 ± 7.00mm and 39.61 ± 5.17mm to the medial malleolus. The intermalleoli line was on average 69.30 ± 5.99mm.
This study will assist in pre- and postoperative surgical preparation through accurate mapping of the DPA. Furthermore, it will assist win clinical location of the DPA for treatment of ischaemic limbs.

Palavras-chave : Vascular variation, Pedal pulsation, Dorsalis pedis artery flap