High Origin of Arcuate Artery- A Case Report

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Abstract Dorsalis pedis artery on the dorsum of the foot was studied to establish the standard description and any variation from normal in the branching pattern in lower limbs of 30 adult human cadavers. The dorsalis pedis artery was present in all 60 (100%) cases. The branching pattern of the artery had textbook description in 54 (90%) cases. In 6 (10%), variation in branching pattern was observed and typing of branching pattern was done as Type A, B and C. The arcuate artery was present in 55(91.7%) cases. High origin of arcuate artery was seen in 1(1.66%) case. Dorsal metatarsal arteries originated from arcuate artery.

Keywords Dorsalis pedis artery · Typing · Arcuate artery · High origin · Dorsal metatarsal artery

Introduction

The arcuate artery arises near the medial cuneiform, passing laterally over the metatarsal bases, deep into the tendons of the digital extensors, and then anastomoses with the lateral

tarsal and plantar arteries. It supplies the second to fourth dorsal metatarsal arteries, running distally superficial to the corresponding dorsal interosseous muscles. In the interdigital clefts each divides into two dorsal digital branches for the adjoining toes. Proximally in the interosseous spaces, they receive proximal perforating branches from the plantar metatarsal arteries. The fourth dorsal metatarsal sends a branch to the lateral side of the fifth toe [1].

The arcuate artery is described as arising laterally from the dorsalis pedis artery at the level of the first tarsometatarsal joint and continuing laterally across the bases of metatarsals 2 through 4 to supply the second through fourth dorsal metatarsal arteries [2].

Materials and Methods

Thirty adult human cadavers from the Department of Anatomy, Govt. Medical College, Patiala comprised the study material. Dorsalis pedis artery was identified at the ankle joint lying midway between the two malleoli deep in the superior extensor retinaculum. The artery was traced on the dorsum of the foot along with its branches and its length measured.

Results

Of 60 lower limbs dissected, 28 (46.6%) specimens belonged to the left side and 32 (53.4%) to the right.

There was variation in branching pattern of the dorsalis pedis artery in 6 (10%). For the purpose of observations and description, these variations were grouped under subheadings as Type A, B and C. The remaining 54 limbs (90%) followed the usual textbook description.

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