Abstract

The purpose of this study was to provide a morphologic description and assessment on the formation level of the sural nerve (SN) and its components. Also we aimed to reveal histological features of the SN components. An anatomical study of the formation of the SN was carried out on 100 limbs from 50 embalmed foetuses. The results showed that the SN was formed by the union of the medial sural cutaneous nerve (MSCN) and the peroneal communicating branch (PCB) in 71% of the cases (Type A); the MSCN and PCB are branches of the tibial and common peroneal nerve (CPN) or lateral sural cutaneous nerves (LSCN), respectively. Formation level of the SN was at the distal third of the leg in 43% of the cases, at the middle third of the leg in 46% of the cases, and at the upper third of the leg in 11% of the cases. The PCB originated in the CPN in 68% and the PCB originated in the LSCN in 3% of the cases. The SN was formed only by the MSCN in 20% of the cases (Type B). Type C was divided into four subgroups: in the first group the PCB and fibres of the posterior femoral cutaneous nerve joined the MSCN in 4% of cases; in the second group the MSCN, PCB, and sciatic nerve did not unite and coursed separately in 1% of cases; in the third group the SN arose directly from the sciatic nerve alone and the MSCN made a little contribution in 2% of cases; and in the fourth group the PCB, fibres of the sciatic nerve, and the MSCN formed the SN in 1% of the cases. The SN was formed only by the PCB in 1% of the cases (Type D). Distances of the formation level of the SN to the intercondylar line and the lateral malleolus were measured and also noted. A detailed knowledge of the anatomy of the SN and its contributing nerves are important in many interventional procedures.