

MANAGEMENT OF VASCULAR INJURIES IN CHILDREN UNDER THE AGE OF 15

Nikolaos- Nectarios Giannakopoulos, Sofia Tzamtzidu, Theofanis Papas

Vascular Surgery Department Hellenic Red Cross Hospital

OBJECTIVE: Several studies suggest that the surgical treatment of arterial injuries in children under 15 years of age results in less satisfactory outcomes. The purpose of this study is to present our clinic's experience in managing arterial injuries and trauma in children.

PATIENTS-METHOD: The study included children under the age of 15 with arterial injuries of both upper and lower limbs, who were hospitalized in two major pediatric hospitals in Athens. These children were treated either surgically or conservatively. In total, 27 children were treated, 15 with upper limb injuries and 12 with lower limb injuries.

RESULTS: The treatment method was either surgical or conservative with systemic heparin administration. Thirteen out of 15 children aged over 6 years (mean age 11.2 years) were treated surgically, while 4 out of 12 children under the age of 6 (mean age 3.9 years) underwent surgical treatment. The greater saphenous vein and the cephalic vein were the grafts used to repair the arterial damage. There were no deaths and limb salvage was 100%. The outcome was also excellent for the children treated conservatively. Those treated conservatively showed signs (biphasic and triphasic) with a portable Doppler on peripheral vessels (brachial artery for the upper limbs and anterior-posterior tibial artery for the lower limbs).

CONCLUSIONS: Children over the age of 6 with limb arterial injuries can be treated surgically as adults. In children under six years of age, especially in infants and neonates (< 2.5 years) where Doppler signals observed in peripheral vessels using Doppler (non-threatened ischemic limbs), conservative treatment with systemic heparin administration (based on body weight) is a feasible treatment method.