

**BACTERIAL COLONIZATION OF TISSUES OF CHRONICALLY ISCHEMIC LOWER LIMB**

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Reaction of arterial wall to bacterial infection as etiological factor in pathogenesis of atherosclerosis remains a contentious issue. The majority of available data on identification of bacterial antigen originates from studies of coronary arteries but not of lower limbs arteries.

**Aim:** to investigate the presence of bacterial cells and microbial DNA with use of broad-range PCR, targeting conserved region (16sRNA), *Chlamydia pneumoniae* (CP) and *Helicobacter pylori* (HP) in fragments of femoral and popliteal arteries of patients undergoing reconstructive surgery or amputation.

**Methods:** Fragments of arteries were harvested and cultured, from the remaining fragment DNA was extracted. PCR amplification was performed with primers for gene fragment coding bacterial 16s RNA, major outer membrane protein (ompA) of CP and urease gene of HP DNA with positive and negative controls. Routine bacteriological cultures of specimens were carried out.

**Results:** Using routine microbiological methods popliteal and femoral arteries contained isolates in 51% of cases (*Staph. epidermidis*, *aureus*, *Enterococcus*, *Pseudomonas*), carotid arteries 4.1% and aorta 0.7%. Microbial DNA (16sRNA) was detected in 64% of examined femoral and popliteal specimens. CP could be demonstrated in 69% of positively-tested patients while HP was detected in 3.8%. In carotid arteries 29% of cases contained bacterial DNA, 29% CP and 0% HP specific genes. Thirty one aortic specimens contained bacterial DNA, 65% CP and 18% HP.

**Conclusions:** Bacterial isolates and DNA were found in lower limb arteries. Aorta and carotid arteries only sporadically contained isolates. The microbes colonizing limb vascular bundles may be responsible for complications after arterial surgery as anastomosis dehiscence and wound suppuration