

論文の要約

報告番号	① 乙 医 第 1184 号	氏名	柏木 圭介
学位論文題目	Quantitative analysis of hemodynamics of congested island flaps under leech therapy		
<p>論文の要約</p> <p>Background: A congested flap is a good indication for leech therapy. However, determining the appropriate number of leeches as well as the appropriate application time in clinical cases is difficult. We analyzed hemodynamics in rabbit island flaps under leech therapy to find a suitable clinical procedure for determining the appropriate number of leeches to be used and the duration of therapy.</p> <p>Methods: Island flaps were raised in 35 rabbit ears, and congestion was induced by venous clamping. Treatment involved use of 1 or 3 leeches and was begun 60 minutes after venous occlusion. Flaps were examined for area of surviving tissue, alterations in transcutaneous oxygen and carbon dioxide tension (TcPO₂ and TcPCO₂), and flow volume. Arteriole and venule diameters and flow velocities were examined microscopically.</p> <p>Results: Flap survival area in the 3-leech therapy group was significantly larger than the 1-leech therapy group and the control group. With 3-leech therapy, TcPCO₂ decreased significantly, as did arteriole and venule diameters. After clamp release, TcPCO₂ and venule diameter continued to decrease in this group, and flow velocity increased significantly.</p> <p>Conclusions: Leech therapy may salvage compromised flaps by replacing congested blood with new arterial blood and thus maintaining flap viability. TcPO₂ and TcPCO₂ monitoring may help evaluate the therapeutic effect and determine the appropriate number of leeches to apply and the duration of therapy.</p>			