

## **Methaemoglobinemia after Liposuction under Tumescant Local Anaesthesia – Diagnostic Value of Pulse Oximetry**

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### **Background:**

Tumescant local anaesthesia with prilocain can lead to clinically significant methemoglobin levels. New generation multiple wavelength pulse oximeters (e. g. Masimo Radical 7®) can measure methemoglobin levels.

### **Methods:**

In this prospective observational study we compared the venous methemoglobin levels and the corresponding pulse oximetric values of the Radical 7® in patients undergoing tumescant local anaesthesia for liposuction procedures. The measurements were performed in Hanseklinik, Luebeck, Germany between 2008 and 2011.

### **Results:**

In 133 patients, we measured a maximum methemoglobin level of 18 per cent. In a Bland-Altman analysis we found a mean bias of +2.2 % (-4.1 to 8.4 limits of agreement) for pulse oximetric values compared to hemoximetry.

### **Conclusion:**

Pulse oximetric measurement of methemoglobin is an early-warning tool for the detection of clinically significant methaemoglobinemia in patients with tumescant local anaesthesia.