

## **Abstract**

### **Hodková, Gabriela - Metabolic Effects Of Hyperthermic Isolated Limb Perfusion (HILP) in Malignant Melanoma Patients**

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The aim of the study is to assess the metabolic consequences of mechanical isolation and hyperthermic cytostatic perfusion in a limb affected by malignant process.

The theoretical part refers to a topic of malignant melanoma, its clinical evaluation and treatment. Methods based on conservative and surgical treatment are described. The isolated hyperthermic cytostatic limb perfusion is a consecutive local treatment indicated in cases of recurrent malignant lesions following surgical resection, when next surgery is impossible.

In the practical part, the laboratory samples and clinical data were recorded in patients who had undergone hyperthermic cytostatic limb perfusion in the 2<sup>nd</sup> Surgical Department of The General Teaching Hospital and First Faculty of Medicine, Charles University Prague. The affected limb was flushed with a warm oxygenated blood containing cytostatic drugs using an extracorporeal circuit apparatus.

Selected arterial blood gas, metabolic and hematologic parameters were studied intra and postoperatively. All numeric results were statistically analysed. The reason for detailed limb and whole body homeostasis assesment is a prediction of any significant local and systemic negative effect of the metabolites from the limb after perfusion. The method of isolated hypertermic cytostatic limb perfusion is very aggressive, but proven to be safe and not toxic for patient's body in case of local application.

Key words: malignant melanoma, limb perfusion, isolation, Alkeran, lactat