

## **ABSTRACT**

In this study, examinations of 6 patients of the ICU of the University Hospital in Hradec Kralove were included. The aim of this study was to describe case reports of individual patients and to look for statistically significant correlations between nutritional support, oxidation of nutrients and other parameters.

Anthropometric measuring and indirect calorimetry were used for the examination of patients.

The case reports show the individuality that occurs in patients. Spearman's correlation analysis was used to evaluate measured data.

Statistically significant correlations were proven, among them relations between enterally given nutrition and the creation/loss of muscle tissue (carbohydrates:  $P = 0,000189$ , lipids:  $P = 0,001284$ , proteins:  $P = 0,000255$ ), between carbohydrate oxidation, resp. protein oxidation and the number of hours spent on ventilation (carbohydrates:  $P = 0,041278$ , proteins:  $P = 0,02185$ ), between respiratory quotients and the duration of the trauma (respiratory quotient:  $P = 0,014695$ , nonprotein respiratory quotient:  $P = 0,027904$ ), between carbohydrate oxidation related to ideal body weight and lipid intake ( $P = 0,014085$ ) and between protein oxidation and carbohydrate intake ( $P = 0,012703$ ).

**Key words:** polytrauma, indirect calorimetry, nutritional support, malnutrition