ABSTRACT

EVALUATION OF METHODS USED TO CALCULATE THE ESTIMATED ENERGY EXPENDITURE FOR PHYSIOLOGICALLY STRESSED OBESE PATIENTS

Nearly two-thirds of adults in the United States are overweight and over 30% are obese. Epidemiologic studies have shown that obesity is associated with a variety of serious health conditions and each year 300,000 deaths may be attributable to obesity. Secondary to multiple co-morbidities involved with obesity, a number of patients end up in Intensive Care Units (ICUs). Calculating the energy requirements of physiologically stressed patients in the ICU is a challenge. Despite its limited use and availability, indirect calorimetry remains the "gold standard" in determining the nutritional requirements.

Using a case series method, this study compared 18 formulae and equations used for estimating energy requirements to results of indirect calorimetry. The results of this study suggest that estimates of energy requirements of physiologically stressed obese patients are most accurate when using actual body weight in the Harris-Benedict equation multiplied by injury factor for sepsis or trauma.

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