ABSTRACT

This thesis presents and compares the results of clinical trials found during intensive insulin therapy (IIT) in critically ill patients (CIP) hospitalized in intensive care units (ICU).

The aim of this thesis was to search usage processing and the importance applications of insulin in the treatment of critically ill patients in intensive care units. It explains principles and issues of insulin use in this indication with presentation of IIT risks.

Clinical studies were carried out in the ICU with a different focus (medical, surgical, cardiac surgery, mixed etc.). In most studies, patients were randomized into two groups - group IIT maintained glycemic range from 80 to 110 mg / dl, i.e. from 4,4 to 6,1 mmol / l; group of conventional insulin therapy should range glycemia from 180 to 200 mg / dl, i.e. from 10,0 to 11,1 mmol / l.

In most studies, it has been shown to reduce complications and mortality in patients treated with IIT compared to patients treated with conventional insulin therapy. Less strict insulin therapy was able partially leave IIT advantage and reduce the risk of hypoglycemia. On the other hand, although IIT increased risk of hypoglycemia, did not increase mortality. Explaining the observed differences in mortality and morbidity among studies appear to be obviously differences in glycemic goals within the control groups, patient variability, diversity performing the studies and nutritional strategy studies.

It is clear that the most important is the constant maintenance of normoglycemia validated titration program intake of insulin and nutrition standardized procedures. This places increased demands on medical personnel and the availability of accurate monitoring technology. Where there has not been consistently maintained normoglycemia has not shown a positive effect of IIT.

Keywords: insulin, glycemia, critically ill patient