

Abstract

This diploma thesis deals with home parenteral nutrition in the day and night regime and its effect on patients. Parenteral nutrition is usually administered at night so that patients can do normal daily activities and so that nutrition administered in this way has the least impact on their lives. Parenteral nutrition is not a physiological route of nutrient administration and it is not natural for the human body to process nutrients at night.

The first part of the theoretical work presents parenteral nutrition and its composition, indications, contraindications and complications. The next part of the thesis describes home parenteral nutrition and its organisation which is necessary for this form of nutritional support to be implemented. It is necessary to monitor many laboratory values on parenteral nutrition, the theoretical part specifically mentions cholesterol, triacylglycerols, glycemia or liver function tests. One of the important parts is the chapter about circadian rhythms, hormones and metabolic changes in energy intake at night.

Qualitative research was chosen for this work, which involved 17 patients on home parenteral nutrition. These patients were getting their nutrition during the night. Their laboratory values such as liver function tests, glycaemia and blood fats was evaluated and compared. The collection of laboratory values took place at the start of home parenteral nutrition and then after 6 weeks and 3 months. The goal of the study was to determine whether the values of liver tests and blood fats changed during home parenteral nutrition.

Research has shown that patients on home parenteral nutrition have elevated liver enzymes, total cholesterol and triacylglycerols, which puts many patients at risk.

Keywords: circadian rhythm; home parenteral nutrition; cholesterol; liver function tests; metabolism; triacylglycerols