

Abstract

A stationary or portable infusion pump can be used to administer home parenteral nutrition (HPN). The stationary pump (SP) must be fasten to the infusion stand, so patients administer infusions in night mode to maintain their quality of life and mobility in the daytime. However, administering the HPN at nighttime can cause complications. Conversely, the portable pump (PP) does not have to be fasten to the infusion stand and the infusions can be administered in day mode during activities, as the PP can be placed in a special backpack.

The aim of this diploma thesis is to evaluate the administration of HPN in day mode in patients with a PP and further to evaluate and compare the results of quality of life and liver function tests results in patients with a PP and a SP.

HPN patients with a PP and a SP completed the HPN-QOL questionnaire in the nutritional clinic at the 4th internal clinic of the General University Hospital in Prague during outpatient visits. In addition to that, patients with a PP completed a questionnaire focused on the administration of HPN in day mode. Liver function tests results (total bilirubin, ALT, AST, GGT, ALP, cholinesterase and albumin) were obtained from patients' medical records.

A total of 14 respondents with a PP and 14 respondents with a SP were included in the research. It was found that the administration of HPN in day mode is completely individual when using a PP, but in half of the respondents, the day mode prevailed. Respondents with a PP did not achieve statistically significantly better quality of life results in the functional scale, symptom scale and HPN scale of the HPN-QOL questionnaire than respondents with a SP. Both groups of respondents rated as the worst items sexual function, employment, ability to holiday/travel or fatigue, while the best rated items were, for example, the ability to eat/drink, emotional function, coping or financial issues. The results of the liver function tests were similar in respondents with a PP and a SP and were within the reference range of liver function tests. Only the results of ALP and GGT were slightly higher than the upper reference limit.

In conclusion, it can be stated that the use of a PP for the administration of HPN in the day mode is completely individual and depends, among other things, on how active the patient is. In addition to the infusion pump, other important factors, such as underlying disease, age, presence of a stoma, or duration of HPN, may affect the quality of life of HPN patients. Further studies are required to demonstrate the effect of day and night modes of parenteral nutrition administration on liver function tests. The results of this diploma thesis may be useful for further research that will deal with the use of a PP in HPN patients.

Keywords: day mode, home parenteral nutrition, liver function tests, quality of life, portable infusion pump