

Abstract

Graduation theses is focused on iron metabolism and ways of its assesment. The importance of iron metabolism wasn't explained enough mainly under the condistions of regular blood withdrawals. Relationship between iron metabolism and processes of non-specific Immunity is very important in the defence against infection.

Main question discussed in this study was the effect of regular blood withdrawals and diet change on iron metabolism keeping sex in considaration. We tried to respect the complexity of blood donation process under human conditions (stress, examination, needle puncture, blood loss). This test show that rats easily tolarate blood losses. Next to last withdrawal was accomplished 7 days before organ extraction to ensure compensatory period. We presume, that regular blood withdrawals accompanied by blood losses were the cause of higher iron serum levels.

It is difficult to transfer specific reaktivty of tested females into human medicine, because rat females doesn't lose blood due to menses. However rat females have multiple pregnancies, which last 21 days when lactation and the ability to impregnate begins right after delivery. Iron is lost when transferred into fetus, placenta and milk. Female with body weght of 350 g is capable of giving birth of newborns with total weight of 600g.

Graduation theses has 73 pages. Study issued from scientific articles and specialist literature. (see Used literature list) Study is divided systematicly into 8 chapters in which I explain complex insight i n iron matabolism and its assesment. The first and second chapter is dedicated to iron metabolism, regulation and its disorders. In third chapter I describe methods used in assesment of iron. Forth chapter is dedicated to practical part, where we can find detailed information about the experiment. In fifth and sixth chapter you can find the summary of

results.