

ICCN Poster Presentations

Clinical nutrition: diagnosis and management

Surveying the absorption level of complexes ethyl and methyl –3-hydroxy-pyran 4- on and its comparison with zinc sulphate available from market, by using the invitro method.

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Zinc deficiency may lead to many symptoms on human body. Zinc sulphate has been used against diseases caused by zinc deficiency for many years. That is why various studies have been done to produce more appropriate compounds of which the complexes malthol and ethylmalthol are the best examples. These compounds produce new complexes with zinc, which have suitable lipophilicity. So they seem to have suitable intestinal absorption and to be appropriate replacement for zinc sulphate. Our purpose in this project is to investigate the intestinal absorption of this type of complexes to evaluate the substitutability of these complexes with zinc sulphate, considering In vitro conditions. Solutions with concentration between 0 and 1000 microgram/litre were prepared by using complexes and zinc sulphate. The intestinal absorption at the different times were measured at constant concentration by using E.G.S method, and the optimum time of maximum absorption was obtained. Then solutions with the different concentration were prepared to obtain the optimum concentration. This study showed that in spite of higher absorption level of zinc sulphate compared to ethylmalthol-Zn, statistically there is no significant difference in zinc sulphate compare to malthol-Zn complex for the two compounds complex malthol. Consequently from the two complexes only complex ethylmalthol-Zn is comparable with zinc sulphate, which leads us to conclude that probably more lipophilicity of complex Ethylmalthol-Zn compared to complex Malthol-Zn caused its higher level of absorption.