Abstract

As per the WHO, hypertension is a major contributor to global disease burden and according to the 2004 US Renal Data Report, >300,000 patients with end-stage renal disease (ESRD) require dialysis. The aim is to formulate optimized self nanoemulsifying drug delivery systems (SNEDDS) containing antihypertensive and calcimimetic drugs which can enhance \textit{in vitro} drug release and hence bioavailability of the said drugs by formulating SNEDDS. SNEDDS of Lercanidipine HCL were prepared by using Capmul MCM, Polysorbate 20 and Transcutol P and of Cinacalcet HCL by Capmul MCM, Polysorbate 80 and PEG 400. The optimized batch was selected on the basis of arbitrary criteria using Design Expert software. We could reduce dispersion time and globule size. \textit{In vitro} drug release study was also carried out to compare optimized SNEDDS with the available marketed conventional tablet. The results of the present research revealed the prospective use of SNEDDS of poorly water-soluble drug like Lercanidipine HCl and Cinacalcet HCl.

It can be concluded that the proposed objectives of the present research work of enhancing bioavailability of Lercanidipine HCl and Cinacalcet HCl of BCS Class II drugs were achieved.

This PhD thesis will help in formulation and evaluation of SNEDDS containing poorly water soluble drugs.

\textbf{List of Publications:}

1. Vijay L. Ghorı, Dasharath M. Patel, Abdel Omri

2. Vijay L. Ghorı, Dasharath M. Patel, Abdelwahab Omri