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Formulation and optimization of compression coated pulsatile release tablets for chronotherapy of thiocolchicoside using 32 full factorial design

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The aim of the present investigation is to prepare and optimize pulsatile release, time specific delivery system for the thiocolchicoside which is used for treatment of lower back pain (orally 4-8 mg two to three times a day). The basic design consists of making a core tablet containing thiocolchicoside and Sodium Starch Glycolate (SSG) as super-disintegrant which can give instant release and compression coated with various proportions of Eudragit S100 and Ethyl Cellulose (EC) to prevent the release before intended period (6 hours). 32 full factorial design was used to optimise the formulation in which amount of SSG in the core and amount of Eudragit S100 and EC in coat were taken as independent variables. The results of in-vitro study indicates that tablets successfully retards the release of drug up to 6 hours and after that more than 90% drug get released in 30 min. The results of the optimized batches' release patterns were similar to predicted release pattern. Programmable pulsatile release has been achieved by compression coating technique, which coincide with predetermined specification required for chronotherapeutic drug delivery.

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Pharmacovigilance study of iron chelators in Thalassemic patients

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Aim: In this study we aimed the documentation of AEs of iron chelators seen in thalassemic patients treated in thalassemia center of Antalya Research and Training Hospital.

Methods: Adverse reactions detected in 276 patients between years of 1989-2014 were recorded retrospectively DFO (20-60 mg/kg, flacon), DFP (75 mg/kg, tablet, suspension) and DFX (10-30 mg/kg tablet) were used as chelators.

Results: Total of 393 AEs were recorded from 276 patients (139 female, 137 male). Uncompliance was detected in 53 patients. Twelve patients discontinued the therapy because of pregnancy. Resistant to iron chelators was recorded in five patients. Some patients used more than one drug in years. Number of usage of DFX, DFO and DFP were 674, 215 and 125, respectively. Adverse reactions were observed as follows: 266 in DFX patients, 59 in DFO patients and 68 in DFP patients. The most frequent adverse effects of DFX were proteinuria (62, % 9.2), liver dysfunction (51, % 7.5) and GIT complaints (50, % 7.4). The most frequent adverse effects of DFO were allergies (10, % 4.6). The most frequent adverse effects of DFP were GIT complaints (21, % 16.8) and neutropenia (19, %15,2).

Conclusion: In this retrospective study adverse effects of iron chelators were recorded. There is no difference between sexes regarding adverse effects. Adverse effects were seen the most in DFP patients and the least in DFO patients. No serious adverse effects were recorded during the study in general.

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