**Topical Pluronic Lecithin Organogel of Leflunomide: In Vivo, In Vitro Characterization**

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| Abstract: | Rheumatoid arthritis is autoimmune disease that causes painful joints. Leflunomide is disease modifying anti rheumatoid drug requires to be administered for prolonged period of time which may cause liver toxicity. Both low solubility and high permeability make it suitable drug candidate to formulate Pluronic Lecithin Organogel with added advantage for site specific drug delivery. Leflunomide containing Pluronic Lecithin Organogel gel was prepared by using 32 full factorial design. Selected independent variables were concentration of Poloxamer 407 and ratio of aqueous: oil phase. Prepared formulation of Organogel was evaluated for different parameters and stability. Optimized formulation of organogel showed (%) drug release upto 8 hours and no phase separation observed during accelerated stability study which indicates that the gel was stable. Further, Gel showed satisfactory anti-inflammatory activity on animal. Histopathology study also confirmed safe topical administration of developed Organogel. From Results, it can be concluded that topical route can be alternate administration route for Leflunomide. |
| Keyword: | Pluronic Lecithin Organogel, 32 Factorial Design, Topical Delivery, Rheology, Anti Inflammation, Histopathology |
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