

Anthelmintic Activity of Liquid Self Emulsifying Drug Delivery System (SEDDS) of Praziquantel

Dr. Kiran Mahajan

Associate Professor, Pharmaceutics

Sharadchandra Pawar College of Pharmacy, Otur, Pune, Maharashtra, India

Corresponding Author: Dr. Kiran Mahajan

kiranmahajan@gmail.com

Abstract: *The present study aims at developing a new adaptable method for evaluation of anthelmintic activity. Liquid self emulsifying drug delivery system was prepared by using design expert method. The anthelmintic activity of emulsion was evaluation by using Indian earthworms at doses 2.5, 5, 10, 15, 20 mg/ml. The Praziquantel was used as standard drug (10 mg/ml). The paralysis and death time of earthworms after administering doses were determined. The result of anthelmintic activity of earthworms showed that the earthworms had taken less time for paralysis and less time for death. It can be concluded that earthworms can be used successfully for the anthelmintic activity study as it is easy, prominent, an adaptable to laboratory conditions. Evaluation of anthelmintic activity of any drug when carried out in laboratory conditions by using the isolated worms from nature cannot be adaptable with artificial laboratory conditions. The present anthelmintic activity study reveals a new methodology with earth worms cultured in laboratory conditions. We studied the anthelmintic activities of an Praziquantel drug on earthworms. This result showed that the earthworms had taken less time for paralysis and death. This novel dosage form might be a promising dosage form in the prevention of worm infections for pediatric patients.*

Keywords: Anthelmintic, Self emulsifying drug delivery system (SEDDS), Praziquantel, Earthworms, Paralysis

REFERENCES

- [1]. Tripathi K.D. Essentials of Medical Pharmacology, Jaypee Brother Medical Publisher Pvt. Ltd. 7th edition, 2013:854-55.
- [2]. Hardman JG, Limbird LE, Goodman and Gilman's. The pharmacological basis of therapeutics, 10th edition, McGraw-Hill Co Inc; 2001:1134-35.
- [3]. Rang and Dales, Textbook of Pharmacology, 8th edition, Elsevier, Churchill Livingstone, 2016: 671-73.
- [4]. Satoskar R.S. et al. Pharmacology and Pharmacotherapeutics. 25th edition, Elsevier, Popular publication Pvt. Ltd. 2017: 823-24.
- [5]. Sharma S., Velpandian T. Lippincott Illustrated Reviews Pharmacology, South Asian Edition, Wolters Kluwer publication Pvt. Ltd. 2019:657-58.
- [6]. Shukla P., et al. Investigation of in-vitro anthelmintic activity Cissampelos Pariera Linn against Pheretima posthuma. IJPSR. 2012; 3(1): 265-267.
- [7]. M.K. Sreeja, Poulouse P.A., et al. comparative study of Anthelmintic activity of albendazole nanoemulsion containing oregano essential oil. IJRSR. 2017; 8(9):20111-19.
- [8]. F. Khan et al., Systematic Development of Self-Emulsifying Drug Delivery Systems of Atorvastatin with Improved Bioavailability Potential. Sci Pharm. 2012; 80: 1027-1043.
- [9]. Meena AK., Sharma K., et al. Formulation development of an albendazole self-emulsifying drug delivery system with enhanced systemic exposure. Acta pharm. 2012; 62: 563-80.
- [10]. B. Clara Gnana Selvi et al., Evaluation of Anthelmintic Activity Using Solvent Extract of Padina Tetrastrumatica in Indian earthworm (Pheretima Posthuma). International Journal of Therapeutic Applications. 2016, 32:77 – 80.
- [11]. Dongare Sujata et al., In-Vitro Anthelmintic Activity of Calotropis Gigantea against Indian Earthworm Pheretima

