عنوان مقاله:

Formulation and evaluation of dental nanofibers by using biodegradable or non-biodegradable polymers

محل انتشار:

اولین کنگره ملی نانو فناوری در علوم سلامت (سال: 1397)

تعداد صفحات اصل مقاله: 1

نویسندگان:

donya Barfar - *Student Research Committee School of Pharmacy, Kermanshah University of Medical Sciences, Kermanshah, Iran. Pharmaceutical Sciences Research Center, School of Pharmacy, Kermanshah University of Medical Sciences, Kermanshah, Iran*

shahla mirzaeei - *Pharmaceutical Sciences Research Center, School of Pharmacy, Kermanshah University of Medical Sciences, Kermanshah, Iran. Nano Drug Delivery Research Center, School of Pharmacy, Kermanshah University of Medical Sciences, Kermanshah, Iran*

خلاصه مقاله:

Background and Objective: Periodontal disease causes destruction of adjuvant structures of the teeth predominate in all groups, ethnicities, races and both genders. It is generally agreed that gram-negative anaerobic germs residing in periodontal vacuities are responsible for periodontitis. Systemic antibiotic therapy is employed in treating this disease condition, but it has limited due to the lack of accessibility to periodontopathic organisms in the periodontal pocket. In this study controlled intra-pocket devices are developed to maintenance of therapeutic drug concentration for the desired period of time.Materials and Methods: Dental films were fabricated either by using biodegradable or non-biodegradable polymers containing tetracyclin depending upon their mode of drug release. The Dental implants were evaluated for their thickness uniformity, SEM, folding endurance, weight uniformity, content uniformity, surface pH, in-vitro drug release and in-vitro antibacterial activity.Findings: Nanofibers had a smooth and bead-less morphology with the diameter ranging from 175 to 320 nm. The release of Tetracycline in Formulation with CS/PVA/PVP for 30 hours. The release of Tetracycline in Formulation with PCL were more than CS/PVA/PVP nanofibers.Conclusion: The prolonged drug release, with proven biocompatibility, antibacterial and mechanical properties of drug loaded nanofibers make them a promising candidate to be used as drug delivery system for periodontal diseases.

کلمات کلیدی:

Nanofibers, periodontitis, Tetracycline, PCl, PVP, PVA, Chaitosan

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/964867