CHAPTER-5
(CONCLUSION)

CONCLUSION

The use of microspheres is of interest for bioadhesion purpose because these pharmaceutical dosage form have a large specific surface, which is indicative of a high interactive potential with biological surfaces. Chitosan appears to be a suitable polymer for the preparation of mucoadhesive microspheres capable of adhering to the mucus layer. It has been used as a microspheres material owing to its versatile biodegradability, biocompatibility and natural origin.

Chitosan being a biodegradable and biocompatible polymer, one would expect that it will not cause any deleterious effects or toxic response in the nasal mucosal cavity even if used for prolonged periods.

Formulating bioadhesive microspheres of Tizanidine Hydrocloride increases the contact time with nasal mucosa, its plasma half life which in turn increases the bioavailability. It has advantage of delivering the effective systemic concentration of the drug by enhancing its uptake for prolonged periods, so there will be no need of frequent administration. Drug can be administered at lower dose with fewer side effects.

The results of present study clearly indicated promising potential of chitosan microspheres for delivering Tizanidine Hydrocloride intranasally.This could be viewed as a potential alternative to conventional dosage forms of Tizanidine Hydrocloride.

The parameters which were found to be optimum for the preparation of bioadhesive microspheres of chitosan are, Drug; polymer ratio 1:3,amount of cross linking agent 1ml, stirring speed 2000 RPM, light and heavy liquid paraffin in 1:1 mixture as the external phase, concentration of Dioctyl sulfosuccinate 0.1%.