OBJECTIVE OF THE WORK

Periodontitis is a chronic bacterial infection that affects the gums and bone supporting the teeth. Toxins produced by the bacteria in plaque irritate the gums and shows the inflammatory response to the gum due to this the tissues and bone that support the teeth are broken down and destroyed. Gums separate from the teeth, forming pockets (spaces between the teeth and gums) that become infected. As the disease progresses, the pockets deepen and more gum tissue and bone are destroyed. Often, this destructive process has very mild symptoms. Eventually, teeth can become loose and may have to be removed.

Local drug delivery system is used to treat periodontal diseases. This drug delivery system deliver therapeutic agent at sufficient concentration inside the periodontal pocket and at the same time minimizing the side effects associated with systemic drug administration. Hence, local drug delivery systems containing antimicrobial agents are used for the delivery to the periodontal pocket.

The dental preparations available in the market are in the form of pastes and gels due to the ease of manufacturing, cost-effectiveness, popularity, packaging and transport.

In this context, there are very few semisolid formulations available in the market for the treatment of dental infection and diseases and there is need for research in the development of medicated dental pastes and gels, which promise to meet the goals of an ideal treatment. Which act locally at infected site.

There are number of antimicrobial agent used for the treatment of periodontitis, in present study Ciprofloxacin hydrochloride and ofloxacin are proposed to be used as model drugs, which is having a wide range of antibacterial and antifungal activity.