

## **Introduction**

Conservative treatment of periradicular pathosis nowadays is one of the prime concerns of endodontists.

Bacteria and bacterial by-products are the main initiating factors for periradicular pathosis. Removal of irritants from root canal system and its total obturation result in repair of inflamed periradicular tissues and permits bone reparative process to move inward from the periphery. Therefore, healing depends mainly on an effective method for bacterial reduction<sup>(1,2,3)</sup>.

The increasing frequency of asking dentist to perform surgical procedure for medically compromised cases necessitate the development of a conservative treatment procedure.

Continuous investigations and researches are always directed to improve the quality of conventional endodontic procedures, to save time and to simplify the complicated treatment procedures. This result in increasing the percentage of success<sup>(4)</sup>.

Laser therapy was found to relieve pain , reduce edema, accelerate wound healing, activate of fibroblasts, osteoblasts, proliferation, collagen synthesis, and nerve regeneration ,this produced a biostimulatory effect on body functions<sup>(5)</sup>.

Acceleration of bone regeneration by low level laser therapy has been a focus of contemporary research being a safe conservative method for treating bony lesions. Low level laser therapy serve to collaborate with classical

techniques of endodontics offering acceleration of bone regeneration in healthy and diabetic patients <sup>(6)</sup> .