

Microscopic evaluation of the natural coral (*Porites* spp.) post-implantation in sheep femur.

ABSTRACT

This study was carried out to microscopically evaluate the natural coral (*Porites* spp.) implanted in sheep femur. 12 adult, male sheep were divided into 4 groups. The defect area was implanted with coral and monitored for up to 12 weeks. The sheep were euthanized at 2, 4, 8 and 12 weeks postimplantation. Microscopically, natural coral implanted into bone tissue showed gradual resorption and progressive replacement by new bone. At 12 weeks postimplantation, the implanted site was almost completely surrounded by mature bone. The results showed that natural coral was a biodegradable and osteoconductive biomaterial, which acted as a scaffold for a direct osteoblastic apposition.

Keyword: Natural coral; Sheep femur; Microscopic.