

Scanning electron microscopic evaluation of natural coral (*Porites* sp.) post-implantation in sheep femur

ABSTRACT

The study was carried out with the aim to evaluate natural coral (*Porites* spp.) implanted in sheep femur using SEM. Twelve adult, male sheep divided into four groups (n=3) were used in this study. The large bone defect (2.5x0.5x05 cm) was created surgically under general anaesthesia on the left proximal femur. The defect area was implanted with coral and monitored for up to 12 weeks. Implants were harvested at 2, 4, 8 and 12 weeks intervals and subjected for scanning electron microscopy. The results showed that natural coral was found to be a biodegradable and osteo-conductive biomaterial, which acted as a scaffold for a direct osteoblastic apposition.

Keyword: Bone formation; Bone resorption; Calcium carbonate; Femur; Scanning electron microscopy; Surgery; Surgical operations