

periosteum of a young animal, and found some time after that the ring had become covered by subsequent bone formation.

It was the natural corollary from this belief, that when bone has been destroyed by inflammation or removed by operation, we must look to the periosteum to regenerate new bone ; and as a matter of fact it is well known that if the periosteum is stripped up from the shaft by a purulent collection beneath it, it does in most cases lay down a sheath of bone outside the space in which the pus lay. Again, after fractures we look to the periosteum to produce ensheathing callus to bind the broken ends together again. Some regenerating power, however, must be allowed to osteoblasts derived from the bone itself, to explain the formation of callus between the actual fractured ends and in the medullary cavity.

Well entrenched as this view has been, it has recently been subjected to most damaging criticism by Sir William Macewen, who goes so far as to state that the function of the periosteum is not to produce bone but to limit the production of bone, and that osseous regeneration takes place from the osteoblasts of the bone itself, not from the periosteum. He supports his thesis by some most interesting experiments on animals, and observations on man.

It has always been admitted that *some* power of laying down bone must be allowed to osteoblasts quite apart from the epiphyseal cartilages or the periosteum, because of course it is their province to fill in the Haversian canals with concentric rings of new bone, and also to cement the ends of a fracture