The use of structural proximal tibial allografts coated with human albumin in treating extensive periprosthetic knee-joint bone deficiency and averting late complications. Case report

The authors report the history of a 74-year-old patient who underwent surgical treatment for segmental knee-joint periprosthetic bone loss using structural proximal tibial allografts coated with serum albumin. Successful treatment of late complications which occurred in the postoperative period is also described. The authors emphasize that bone replacement with allografts is a physiological process that enables the stable positioning of the implant and the re- construction of the soft tissues, the replacement of extensive bone loss, and also it is a less expensive operation. It has been already confirmed that treatment of lyophilised allografts with albumin improves the ability of bone marrow- derived mesenchymal stem cells to adhere and proliferate the surface of the allografts, penetrate the pores and reach deeper layers of the graft. Earlier studies have shown osteoblast activity on the surface and interior of the graft.

Keywords: albumin coated allograft, freeze-dried allograft, allograft-prosthesis composite, total knee prosthesis re- vision, supply of complications

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