Cell injections accelerate fracture healing

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Long bone fractures heal faster after injections of bone-building cells. Research published in the open access journal *BMC Musculoskeletal Disorders* has shown that osteoblast cells cultured from a patient's own bone marrow can be injected into the fracture area and can speed the healing process.

Dr Seok-Jung Kim from the Catholic University College of Medicine, Seoul, coordinated a multi-centre, randomized clinical study of the osteoblast treatment. He said, "The cultured osteoblast injection group showed fracture healing acceleration of statistical significance, and there were no specific patient complications when using this treatment. Cultured osteoblast injection should therefore be considered as a successful treatment option for long-bone fracture".

Between May 2006 and January 2008, 64 patients were included in the study. Of these, 31 were randomly allocated to receive the treatment and 33 were left to heal normally as a control group. There were no significant age, sex or body-shape differences between the two groups. According to Dr Kim, "There was significantly more bone growth in the experimental group, compared to the control group. Autologous cultured osteoblast transplant is a safe and effective method for accelerating the rate of fracture healing."

Dr Kim added, "Time has increasingly become the most important factor in clinical decision-making. While fractures generally will eventually heal, bone union can frequently be delayed to the extent that it requires bone transplantation. Not only does this cause psychological and physical

pain to the individual patient, it's also not economically viable. Although bone transplant remains the most effective method of bone union, osteoblast injections provide an alternative which can be performed under local anesthesia with no requirement for surgery".

More information: A multi-center, randomized, clinical study to compare the effect and safety of autologous cultured osteoblast(OssronTM) injection to treat fractures, Seok-Jung Kim, et al., *BMC Musculoskeletal Disorders* (in press), www.biomedcentral.com/bmcmusculoskeletdisord/

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