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Post-transplant DEXA Scan Results In Correlation To Incidence Of Fracture Omar Ragy[1], Post-transplant DEXA Scan Results In Correlation To Incidence Of Fracture Giorgio Gentile[1], Post-transplant DEXA Scan Results In Correlation To Incidence Of Fracture Robin Parry[1]
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Post transplant DEXA scan results in correlation to incidence of fracture

Background: Bone fractures are a known complication that occur during the post transplant period. The use of DEXA scanning is well established for assessing bone mineral density (BMD) in the general population. We were aiming to assess the utility of these scans in the post-transplant period. Hence, we tried to identify the incidence of fractures and correlate that with the change in DEXA scan results post transplant.

Methods: To identify the change in DEXA scan results in the post transplant period and correlate that with the incidence of fracture, we identified patients who had at least 2 DEXA scans during their post transplant period, 5 years apart. Data were collected based on total T score for both lumbar and femoral areas. The standard of care for our patients is to receive calcium,vitamin D and bisphosphonates as bone prophylaxis during the post transplant period.

Results: We retrospectively collected data for 50 patients. 14 patients had a living-donor kidney transplant, 21 had a deceased-donor kidney transplant , while data on type of transplant were not available for 15 patients. 38/50 patients were diabetic. In addition, 36 patients had one transplant whereas 14 patients had more than one transplant. The mean age was 56 years. Female-male ratio was 1:1.4 and mean duration of transplant was 18 years. 10 patients out of 50 (20%) developed fractures, after an average interval of 9 years post transplant. None of these fractures were at the level of the spine, neck of femur. Fractures were either at the wrist or ankle apart from one, which was at the level of the humerus. On average, total T score improved by 0.35 and 0.05 in the lumbar and femoral area respectively, with an overall improvement of 0.4. Furthermore, an improvement was witnessed in the fractured population, with a 0.56 improvement in total lumbar T score , whereas no change in average total T score was observed in the femoral area.

Conclusion: DEXA scan changes over 5 years post transplant did not correlate with patients at risk of fractures, nor with the incidence of fractures. The commonest sites of fractures in our cohort of patients were mainly wrists, humerus and ankles.