Age is related to periprosthetic bone density and functional capacity

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Hannu Aro and colleagues have performed an excellent and meticulous study using preoperative CT measurements of the proximal femur in hip OA patients scheduled for uncemented THA. Volumetric cortical and trabecular BMD was lower in certain hip regions of interest in patients who showed increased subsidence of the stem measured by RSA and decreased recovery evaluated by walking parameters and PROMs. The finding is predictable and fits well with the theory that bone quality plays an important role in the achieved stability of the hip implant. Only thing I missed, is the discussion of the possible confounders of the study. It seems that the patients showing higher subsidence and less satisfactory recovery are 3 years older and may be a bit less fit than the patients with lower subsidence of the stem. No adjustment for these parameters were done. The patient age is related not only to bone quality but also functional capacity after operation. Despite these minor limitations the study highlight the importance of preoperative bone quality in patients undergoing uncemented THA. In older patients with low bone density and enlarged femoral canal, cemented THA should be preferred.

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