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NEWSLETTER

Spring 2019

AUCKLAND Bonedensity
Managing Bone Health

Who should have a bone density measurement?

Is there a place for screening of patients for osteoporosis?

Osteoporosis is a prevalent disorder leading to considerable morbidity from fracture, and is a contributor to mortality from hip fracture in the elderly. The disorder is diagnosed by measurement of bone mineral density (BMD) using dual-energy X-ray absorptiometry (DXA) scanning, which compares BMD of a scanned patient with the mean normal value in young adults to generate a T-score, and this value together with assessment of age, fracture history and risk factors can provide an estimate of the future risk of fracture, and thus guide treatment aimed at fracture prevention.

A decision by a medical practitioner whether to assess a patient for possible osteoporosis is traditionally performed by case finding, performing a DXA scan in those thought to be at increased risk. An alternative strategy could be general screening of the older population, but this has not previously been tested in appropriate studies. However, three trials of screening for osteoporosis have recently been carried out in the UK, Denmark and the Netherlands, in which the study populations were randomised to screening for osteoporosis or to "usual care" by their GPs. Two studies used a two-step process in which those randomised to screening were sent a questionnaire to assess risk, and individuals thought to be at increased risk were offered a DXA scan and their GP was notified with a recommendation for treatment if indicated. Patients in the third study proceeded straight to DXA scanning. The overall group comprised 56,000 women age 65-90 years, half of whom were randomised to screening (and treatment if indicated organised by their GP), and their fracture incidence was then recorded over the subsequent 5-10years. About one quarter of the screened group ended up on treatment, compared with about 18% of the "usual care" group whose GPs started treatment based on BMD measured as part of standard practice.

The results of the 3 studies showed no significant reduction in fracture incidence in the screened group compared with usual care. Although there were criticisms of the studies, including the high rate of treatment in the control non-screened group, this was a negative "real world" result indicating that general screening for osteoporosis in older women is not effective at fracture prevention.

These recent findings emphasise the importance of case finding of osteoporosis by clinicians based on traditional risk factors for the disorder. These might include:

- Those with a history of fracture, especially low-impact insufficiency fractures
- Those on treatments likely to reduce BMD such as steroids and breast and prostate cancer treatments

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- Those with a positive family history of osteoporosis/fracture
- Individuals with a history of hypogonadism or early menopause
- Frail older individuals especially if there is increased falls risk
- Those experiencing rapid weight loss e.g. after bariatric surgery
- Patients with coeliac disease or inflammatory arthritis
- Other situations where the patient or medical practitioner is concerned about possible reduced bone density

New Bone Density machine at Botany

Auckland Bone Densitometry is replacing its DXA bone density machine at their Botany rooms at 260 Botany Road Superclinic with a new state of the art ARIA Lunar scanner. The new scanner should be operative in October 2019, and while the replacement is occurring urgent DXA measurements can be done at our Mercy Hospital site in Epsom (contact central office for appointments at 623 2301 in the usual way).