Editorial

The Frax tool: still under utilized

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Osteoporosis, and the fractures that result from it, are a global public health issue. The management of osteoporosis has undergone significant changes in the past decades. However, its management is marked by wide disparity, and major differences, across the world. Though the gold standard for diagnosis is bone mineral density (BMD), performed by dual energy X-ray absorptiometry (DEXA),[1] this investigation is inaccessible to patients in many parts of the world. A better tool, however, has been available since 2008, to compute the fracture probability or risk. This algorithm, known as FRAX tool, utilizes various history-based questions related to risk factors, and simple anthropometric data, with or without BMD data, to calculate the probability of hip and/ or major osteoporotic data, over up to 10 years.[2,3] The Journal of Pakistan Medical Association has highlighted the relevance of FRAX to Pakistan and South Asia, while encouraging its use in region.[4]

Recently, researchers have assessed the uptake or utilization of FRAX across the world.[5] While most European, North American and Australasian countries use the model extensively, South Asian countries have not begun to take full advantage of this freely available, validated tool. Bermuda, Slovenia, Switzerland, USA and Belgium, all report over 1000 calculations of FRAX for every million inhabitants aged 50 years or more. New Zealand, UK, Lebanon, Canada, Sweden and Ireland report over 6000 calculations per million population aged 50 or more. This is heartening, as most of these countries enjoy easy availability of DEXA; they still find FRAX a useful tool.

The South Asian countries of Afghanistan (2 calculations of FRAX per million population aged 50 years or above), Nepal (15), Myanmar (16), Pakistan (23), Bangladesh (29), and India (36), report low usage of FRAX. Bhutan (242) and the Maldives (96) outperform their larger neighbours, in spite of having no formal endocrinology associations. Sri Lanka, too, with 134 FRAX calculations per million population, makes relatively better use of FRAX, perhaps due to a vibrant, endocrine community that is proactive in spreading medical education.

FRAX can be used in different manners. It can be used as pre-screening test, to decide whether or not to order a DEXA; as an adjunct or as an alternative to BMD measurement. A treatment threshold, specific for each age and gender, can be calculated to help decide necessity for anti-osteoporotic therapy. Apart from its utility in informing diagnostic and therapeutic decisions, FRAX calculations help spread public awareness about osteoporosis, and may encourage healthy behaviour in persons exposed to the tool.

All these advantages, however, will translate into better health only if we begin to use FRAX extensively. The simplicity of the instrument, its availability as both online and paper-based models, lack of cost, and applicability to South Asia (using Indian Singaporean Indian ethnic, or Sri Lankan data) all call for more wide spread use in our part of the world.

As FRAX is a non-commercial tool, it has not received the push that it deserves. Other risk engine calculators for osteoporosis, such as the multiethnic Q Fracture from UK,[6] and the Garvan calculator for elderly Australians,[7] fare no better. The JPMA renews its call for dissemination of the FRAX tool, along with other non-DEXA based fracture risk calculators, across all borders, across all medical and surgical specialties, to ensure better bone health for our population.

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