Journal of Clinical Densitometry: Assessment & Management of Musculoskeletal Health, vol. 21, no. 1, 1–2, 2018

1094-6950/21:1–2/$36.00
https://doi.org/10.1016/j.jocd.2017.12.001

Osteoporosis: Heading Towards the Perfect Storm

Ronald C. Hamdy*

Dark clouds are gathering on the horizon, gale force winds, soon to become hurricane level winds, are battering our shores. It is getting dark. We have no running water, no electricity and floods have blocked our escape route. We are heading towards the perfect storm. This nightmarish scenario is gradually but surely unfolding. We are heading, full speed ahead, in the wrong direction. Of course I am not talking about the weather, I am referring to osteoporosis, its detection, diagnosis, management and potential impact.

The scope of the problem is monumental and is discussed in the Proceedings of the 2017 Santa Fe Bone symposium we are pleased to publish in this issue of *JCD*. It is sobering to realize that in the USA, about 5 million women over the age of 55 years were hospitalized between 2000 and 2011 because of osteoporotic fractures. This number exceeds the total number of women hospitalized for strokes, myocardial infarction and breast cancer. However, unlike our colleagues in cardiology, neurology and oncology who have been so assertive over the past few years that it is now difficult to find many patients with hypertension, hyperlipidemia or breast cancer not diagnosed and treated for these conditions. Furthermore, asymptomatic people, with no risk factors are routinely and repeatedly screened for these conditions. So why, given the prevalence of osteoporosis and its potential impact, are we not doing a better job at convincing our colleagues and the public of the value of screening for osteoporosis, diagnosing and treating it, especially as we now have effective and relatively safe medications that have been shown to reduce the fracture risk? These statistics are sobering and there is no relief on the horizon: the relative and absolute number of people in the age bracket to develop osteoporotic fractures is steadily increasing. At the risk of being alarmist: an epidemic is looming on the horizon: the perfect storm. This, however, should not be the case.

The diagnosis of osteoporosis is simple and straight forward. Bone densitometry is still the gold standard for diagnosing osteoporosis. The diagnosis also can be made if the patient sustains a fragility fracture or if the risk of sustaining an osteoporotic fracture as calculated by the FRAX permutation reaches or exceeds 20% or 3% for the risk of a major or hip fracture respectively (Siris et al Osteoporos Int 2014;25:1439–1443). DXA scans are relatively cheap and there is still a plethora of densitometers in the USA. Regrettably, however, many Centers are getting rid of their densitometers because the reimbursement is so low that it is no longer cost-effective. Surviving Centers are able to make up the cost by having a large volume of patients, but even some of these Centers are reconsidering whether it is profitable to continue performing DXA scans. If reimbursement does not increase, many more Centers may have no option but discontinuing doing DXA scans. This in turn will reduce the number of patients identified and treated for osteoporosis.

Substantial strides have been made in the management of osteoporosis. Patients now have a choice: one tablet once a month (risedronate, ibandronate), one tablet once a week (alendronate, risedronate), one tablet once a day (raloxifene), one subcutaneous injection twice a year (denosumab), one intravenous infusion once a year (zoledronic acid) or one daily subcutaneous injection for 18 to 24 months (teriparatide, abaloparatide). Unfortunately apart from romosuzamab, to the best of my knowledge, there are no new medications on the horizon.

It is worthwhile remembering and emphasizing to our colleagues and the public, that no medication is entirely free of adverse effects. This includes medication for osteoporosis. Unfortunately the emphasis has not been on the risk/benefit ratio of the medication, but rather on the rare, very rare, potential serious complications of these medications. As we have not been able to effectively inform the public of the potential benefits versus potential adverse effects of these medications, many patients are afraid of taking medications for osteoporosis fearing the potential adverse effects and many clinicians are reluctant to initiate treatment for osteoporosis because of their concerns about adverse effects. As discussed in the Proceedings of the Santa Fe Symposium in this issue, they also lack clear guidance on the duration of therapy, how to monitor patients on therapy and how to assess the effectiveness of the treatment for individual patients.

*Address correspondence to: Ronald C. Hamdy, MD, MTh, FRCP, FACP. E-mail: HAMDY@mail.etsu.edu

We also have not been successful at convincing the public and also regrettably some of our colleagues of the importance of non-pharmacologic means of managing osteoporosis. It is not uncommon to find patients who appear to be not responding to osteoporosis medication, only to find out their daily calcium and vitamin D intakes are very low and that they have hypovitaminosis D. This too is discussed in the Santa Fe Proceedings in this issue of *JCD*. A well-balanced nutritious diet, avoiding cigarette smoking, avoiding excessive sodium and caffeine intake and undertaking a combination of gentle resistive and aerobic exercises are measures to ensure maximum benefit of the prescribed medication.

So what will it be? Are we going to withdraw to our shelters and hope the storm passes-by without causing too much damage or are we going to consolidate our shelters and face the storm? I am sure that like other storms this one too will pass. I only hope that when it reaches us we will be well prepared and able to face it. We have the means of doing it, we can do it, we should do it and I believe we must do it.

Happy Reading.

Ronald C. Hamdy, MD, MTh, FRCP, FACP

Editor-in-Chief

Editor's note: In this issue of *JCD* we also publish a letter from Dr. Laura Watson and colleagues responding to comments made by Dr. Ng et al about her manuscript published in the last issue of *JCD* (20-4): "An investigation into the differences in bone density and body composition measurements between 2 GE Lunar Densitometers and their comparison to a 4—component model". Unfortunately due to a series of factors, we were not able to publish Dr. Watson's rebuttal in the same issue as her original manuscript and Dr Ng's comments. I accept full responsibility for this and apologize to Dr. Laura Watson.