CURRENT CONCEPTS IN THE MANAGEMENT OF OSTEOPOROSIS

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Objective: Most patients at high risk of fracture are not receiving treatment to reduce the risk, despite the availability of excellent diagnostic tools, validated fracture risk assessment algorithms, and pharmacologic agents proven to reduce fracture risk. The large osteoporosis treatment gap is recognized as a global crisis in the care of osteoporosis. New strategies for managing patients with osteoporosis are needed.
Materials and methods: The concepts presented here are examples of strategies that, in the opinion of the author, may improve the care of patients with osteoporosis. These concepts are supported by data and expert opinion in published medical literature.
Results and discussion: DXA quality matters. Poor quality bone density testing by dual-energy X-ray absorptiometry (DXA) is common. Failure to perform precision assessment and errors of quality control, analysis, and interpretation may have adverse clinical consequences and be costly. All DXA facilities should understand and implement DXA Best Practices. Training and certification of DXA technologists and interpreters through organizations such as the International Osteoporosis Foundation (IOF) and International Society for Clinical Densitometry (ISCD) are important in assuring DXA quality. The highest level of confidence for quality DXA testing is achieved through facility accreditation.
Imminent fracture risk. A recent fracture, one that has occurred in the past 1-2 years, is associated with a much greater risk of future fracture than a remote fracture that occurred more than 2 years in the past. A recent fracture in an adult 50 years of age and older represents a "bone attack" that requires urgent evaluation and intervention to reduce the risk of future fractures.
Osteoporosis is a lifelong disease. When treatment of osteoporosis is followed improvement of T-score to a value that is > -25, the patient still has osteoporosis. There is no "cure" for osteoporosis. Stopping treatment will be followed by loss of bone mineral density (BMD) and increasing fracture risk. These changes occur slowing after stopping bisphosphonate therapy and rapidly after stopping non-bisphosphonate therapy.
Treat-to-target. There is solid evidence with a wide range of osteoporosis medications that greater increases in BMD are associated with better reduction of fracture risk. A patient may respond well to therapy yet remain at very high risk of fracture. Response to therapy is essential but not necessarily sufficient to achieve and acceptable level of fracture risk. When treatment is started because of T-score ≤ -2.5, consider a target T-score at least > 2.5, or better yet, T-score in the range of -2.0 to -1.5.
Anabolic therapy is superior to antiresorptive therapy for high risk patients. There are now 4 published randomized controlled clinical trials showing superiority of anabolic agents in preventing fractures compared with antiresorptive therapy. Anabolic therapy should be considered in appropriately selected high risk patients.
Sequence of therapy matters. For patients at very high risk of fracture, consider initiating treatment with an anabolic agent. Anabolic therapy should always be followed by an antiresorptive medication to consolidate and enhance the therapeutic effect. When an anabolic agent is given after a potent antiresorptive medication, the anabolic effect may be delayed or attenuated.
Secondary fracture prevention. A fracture liaison service (FLS) is a systematic strategy for identifying fracture patients, entering them in a registry, and following them to assure that they and evaluated and treated to reduce the risk of future fractures. Successful FLS can prevent fractures and reduce healthcare costs.
Technology enabled collaborative learning. Bone Health TeleECHO is the prototype for this type of learning. The ECHO model of learning can be replicated anywhere there is Interact access, in the right time zone and right language for the participants. Learning with ECHO can allow more patients to receive better care, closer to home, at greater convenience and lower cost than referral to an academic center.
Conclusions: The implementation of new and emerging concepts for the management of osteoporosis provide opportunities to narrow the treatment gap and reduce the burden of osteoporotic fractures.

KEYWORDS: Osteoporosis; fractures; antiresorptive therapy.