Medical Arts Pharmacy Newsletter

HEALTH Matters

A RESOURCE TO HELP KEEP YOU INFORMED

Paradigm shift in the prevention and treatment of osteoporosis:

Statistics indicate that 1.4 million Canadians are affected by osteoporosis, and, that fragility fractures are responsible for 80% of those that occur in men and women over age 50. To address this serious issue - one that is expected to increase as the population ages - a panel of experts working with Osteoporosis Canada has released new Clinical Practice Guidelines which focus on prevention (of fractures) rather than on treatment of low bone mineral density alone.

Essentially, the 2010 guidelines recommend that men and women over 50 be assessed for multiple factors that may contribute to low bone mineral density (BMD) and identify those at high risk for fracture.

The following list of factors (for high risk) are included:

1) fracture after age 40
2) history of parental hip fracture
3) current use of glucocorticoids
4) tobacco use (smoking)
5) high intake of alcohol
6) history of rheumatoid arthritis
7) history of falls and osteoporosis put a person at higher risk of fracture (assess the GET UP AND GO)
8) loss of ≥ 2cm of height from when last seen by the physician may indicate a person has sustained a vertebral fracture
9) loss of > 10% of weight from when the person was 25 years old may also indicate higher risk

In addition, the guidelines recommend that every person over 65 should have their BMD measured via dual energy x-ray absorptiometry (DXA), and/or that those between 50 and 65 be considered for BMD if they are considered at high risk.

In terms of management for those at risk for osteoporosis and fracture, and integrated approach is recommended and includes:

1) Regular active weight-bearing exercise (to help with physical function and to reduce pain)

2) Calcium and vitamin D supplementation (Note: One of the key changes since the 2002 guidelines)

   A) The total daily intake of elemental calcium (through diet and supplementation) for individuals over age 50 should be 1200mg.

   B) For healthy adults at low risk of vitamin D deficiency, routine supplementation with 400-1000iu vitamin D , daily is recommended.

   C) For adults over age 50 at moderate risk of vitamin D deficiency, supplementation with 800-1000iu vitamin D, daily is recommended. To achieve optimal vitamin D status, daily supplementation with more than 1000iu may be required. Daily doses up to 2000iu are safe and do not necessitate monitoring.

If you have requests, suggestions or comments for future issues, your feedback may be directed to **suzie@medicalartspharmacy.ca**

Written by Suzie Pilon B.Sc.Phm., CDE, Certified Geriatric Pharmacist, and reviewed by Josee Lemay, Certified Geriatric Pharmcist, associate clinician at the UofM

Medical Arts Pharmacy 173 Montreal Road & 30 13th Street East, Cornwall, Ontario Phone: 613-932-6501 or 613-933-0670

D) For individuals receiving pharmacologic therapy (> 2000iu vitamin D) for osteoporosis, measurement of serum 25-hydroxyvitamin D should follow three to four months of adequate supplementation and should not be repeated if an optimal level (≥ 75nmol/L) is achieved.

3) Pharmacologic agents reduce the risk of fractures in general from 30-70%. The effectiveness depends on the age and on the site. Osteoporosis Canada recommends pharmacotherapy if the 10-year absolute fracture risk is greater than 20% and for a person who had a hip or spine fracture. Management decision should be individualized in those with moderate fracture risk (10-year fracture risk of 10% to 20%) . The panel of experts recommended the use of the CAROC system based on sex, age, BMD, prior fragility fracture, use of glucocorticoids to evaluate the risk of fractures. CAROC which stands for Canadian Association of Radiologists and Osteoporosis Canada is preferred over WHO Fracture Risk Assessment Tool (FRAX) which requires a computer or a web access.

Which agents should be used?

Osteoporosis Canada recommends the following:

1) For menopausal women requiring treatment of osteoporosis, alendronate, residronate, zelodronic acid and denosumab can be used as first-line therapies for prevention of hip, nonvertebral and vertebral fractures.
2) For menopausal women requiring treatment of osteoporosis, raloxifene can be used as first-line therapy for prevention of vertebral fractures
3) For menopausal women requiring treatment of osteoporosis in combination with treatment for vasomotor symptoms, hormone (estrogens w or w/o progestins) can be used as first-line therapy for prevention of hip, nonvertebral and vertebral fractures.
4) For menopausal women intolerant of first-line therapies, calcitonin or etidronate can be considered for preventioon of vertebral fractures.
5) For men requiring treatment of osteoporosis, alendronate, residronate and zoledronate acid can be used as first-line therapies for prevention of fractures
6) Testosterone is not recommended for the treatment of osteoporosis in men.

Long-Term use of biphosphonate therapy or not!

There are data to suggest the long-term use of biphosphonates might increase fracture risk in some patients (recogninzed as atypical fractures). Canadian guidelines provide information on when to begin biphosphonate treatment and encourage physicians to continue osteoporosis therapy without a drug holiday for individuals at high risk for fracture. On the other hand, because of the risk of atypical fractures with long-term use of biphosphonates, women with no increased risk of vertebral fracture, who have a good response to five years of biphosphonates, and total hip BMD T-scores ≥-3.5, physicians may consider discontinuing biphosphonate therapy for up to five years. BMD should be closely monitored at least every other year in women who opt to discontinue biphosphonate therapy after five years. In those with rapid declines in BMD after discontinuation of therapy (e.g., more than 3% to 4% in the spine or 4% to 5% in the hip versus the level seen when biphosphonate was stopped), consider resuming the biphosphonate therapy or a switch to another osteoporosis agent. It is unclear whether the long-term safety and efficacy varies among different biphosphonate treatment regimens (e.g., IV vs oral, daily vs weekly vs monthly vs yearly administration).

Treatment decisions should be reviewed annually, whether a patient is on or off biphosphonate therapy. Keep in mind , a patient who complains of a thigh pain and who has been treated on biphosphonate long-term may suffer from a stress fracture which may result in complete fracture of the femur. Further examination is warranted.

Practice Pearls:

Alendronate and residronate must be taken at least 30 minutes before the first food, beverage, or medication with 6-8 oz of plain water only. Swallow as much water at a time as possible. Avoid sipping . Alendronate, etidronate and residronate can not be crushed. Etidronate/calcium (Didrocal) is not consider a first-line therapy for treatment of osteoporosis.

Next newsletter will talk about zoledronate acid (Aclasta) denosumab (Prolia) and teriparatide (Forteo)

Have a Merry Christmas and a Happy New Year!

Newsletters can be retrieved from our website : www.medicalartspharmacy.ca