

# OSTEOPOROSIS: *Brittle Bones in Old Age*

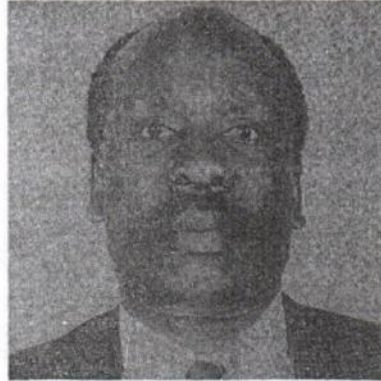
BY DR. J. A. OGENG'O

**T**he stooping posture of old women and men; the back pain that is hard to treat; the fractures that doctors seem reluctant to do much about; the too tired old people - osteoporosis may be the cause.

Sometimes being a young doctor can be a good thing - you do not necessarily have to take responsibility. Miss Branch was 85 years old when I first met her, at the Succentura Hospital for old couples. She had an obvious stoop, looked tired most of the time. Standing from a sitting position seemed very painful to her, and to walk without a walking stick was one thing she had been told never to attempt. In fact Dr. Fletcher had recommended a wheelchair for her, but advised that she should be encouraged to take several walks in the ward garden several times a day. The resident physiotherapist had to see her three times a day. But this old lady had a strange determination to defy the doctors orders.

I was asked to take the night shift that day. While I was holding her hand to help her rise from the bed, there was a loud bang, and the startle made both of us to let go. She fell back to her bed and broke her thigh bone and the wrist. She screamed with pain and the alarm went wild. The white nurse turned blue, but she was composed enough to call Dr Fletcher at once.

The doctor, 81 years old could also not get to the site quickly but all the same, two hours later he ar-



*Dr. Ogeng'o: "The symptoms of Osteoporosis are directly propotional to the disease; the latter being governed by the rapidity with which the changes occur, and the presence and absence of the factor"*

rived. In the hurry, he too developed a sharp lower back pain, severe enough to earn him admission to one of the deluxe rooms of the hospital. As I waited for the other senior doctors to appear I had a friendly chat with Dr Fletcher. He assured me that I had nothing to do with what had happened and that I should go and sleep. He would be fine with rest after a while. I needed the assurance because I risked my attachment being terminated if I made silly mistakes about the care of reputable personalities in the city. Both Miss Branch and Dr. Fletcher were victims of osteoporosis!

Osteoporosis is a condition when the bones are so thin and spongy, that the risk of fractures is high. Bone in the body is constantly being laid down and broken down in a well calculated and balanced manner. Osteoporosis results when the rate of breakdown exceeds the rate of laying down. Many old women;

and some old men, will have osteoporosis, whether or not they have symptoms. Because osteoporosis occurs in every aging and senile person, the term "senile osteoporosis" has sometimes been used. However, many individuals exhibiting osteoporosis without obvious cause are neither aged nor senile. This is sometimes called "idiopathic osteoporosis", meaning "causeless" osteoporosis. Introduction of the designation "post menopausal osteoporosis" is apt because the disease generally affects women after menopause and administration of female hormone (estrogen) plays a role in reducing the disorder.

What causes osteoporosis is not always clear. The extremely high incidence of osteoporosis in women; its constant tendency to appear in menopause and its positive response to estrogen (the female hormone lost after menopause) has led to the thinking that post menopausal state is the commonest causative factor in senile and idiopathic osteoporosis. The occurrence in old men may either be related to declining levels of male hormone; or the general decline in repair processes of the body with age. Other hormonal declines may be implicated. Other factors that may promote osteoporosis include:

- Inadequate physical activity, either generalized or localized. The high incidence of osteoporosis in affluent societies may be related to this. Immobilization by splinting, or pain; being bed ridden due to



chronic disease or paralysis, all have their contribution to make.

- Severe malnutrition, especially involving deficiency of calcium, vitamins and other essential elements for bone formation.
- Prolonged treatment with steroidal drugs; and/or deficiencies of hormones
- Chronic wasting diseases such as rheumatoid arthritis or cancer.
- Some hereditary disease of bone.

The symptoms of osteoporosis are directly proportional to the severity of the disease; the latter being governed by the rapidity with which the changes occur, and the presence or absence of other factors. However, some of the patients are symptom free, the disease being accidentally discovered during the causes of X-ray examinations for some other malady. The average period of onset of symptoms following menopause is between nine and fifteen years, being later in women whose menopause has been induced artificially.

The patient usually experiences a sudden snap or pain in the back as a result of a jolt, fall, lifting or bending. The back pain persists and any sudden movement tends to cause sharp, darting pains. These episodes of pain are due to fractures of the thin brittle bones of the backbone occurring from trivial trauma. The middle of the back is most commonly affected. Persistent backache may be due to progressive compression or collapse of several vertebrae. Such compression and/or collapse may result in loss of stature and even hunch back and less of height stoop.

Other bones that are frequently affected include the neck of the thigh bone (femur) upper end of the arm bone (humerus) and the lower end of the forearm bone (radius). The skull is rarely affected. Pain can therefore be felt in any of the places where the fracture has occurred.

There are several other diseases which may present like osteoporosis, but the doctor should be able to distinguish them easily.

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Such diseases include rickets and osteomalacia; high levels of parathyroid hormone; cancerous diseases of bone whether primary or secondary etc.

The diagnosis of osteoporosis should rarely present any difficulty to a doctor, and now you should be able to suspect the disease and give your doctor a chance to confirm. The patient is most likely to be a woman ten or so years after menopause, presenting as outlined above

and also like Miss Branch. Men too, like Dr. Fletcher, may be affected. X-ray examination, and blood tests of levels of calcium; phosphorus, vitamin D; and of several hormones usually confirm the diagnosis.

The logical approach to the treatment of osteoporosis is based on certain basic principles:

- Correction of the primary causes where one can be identified, such as endocrine disease or excessive steroid treatment.

- Patient understanding that the natural history of the disease is characterized by spontaneous improvement; and that suitable regular exercise is beneficial so that they can remain/become physically active if symptoms permit
- Immobilization (fixation) following a fracture should usually be limited to the part involved and should be accompanied by graduated remedial exercises.

- Adequate intake of calcium and vitamin D. Cow's milk is the best source of calcium. While margarine and cod liver oil are good for vitamin D., Cheese and eggs are pretty good too. Exposure to the sun helps the skin

to synthesize vitamin D too. Calcium supplements are definitely beneficial.

- Cyclical estrogen treatment for healthy post menopausal women is a good idea.

The relief of pain is best obtained by use of pain killers, adequate rest, increasing the tone of muscles of the back by calculated exercise and supporting when necessary by a light

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some of the causes are potentially dangerous. They could cause deafness. Still, the aching could be the only warning sign of a serious disease process.

• The word "throat" is nonspecific and vague. It refers to the upper parts of both the airways and the foodway. The esophagus (gullet) and larynx (voicebox) are often included. In most cases, like cancer

elsewhere, the cause is not known. However certain factors have been implicated in the causation of the throat cancer. They include:

(a) Environmental pollution - dust, motor-vehicle exhaust fumes, smoke from industries, vegetable dust such as from wood and textile industries.

(b) Tobacco smoking - both active and passive, and especially cigarette smoking

(c) Drinking of alcohol and/or beverages such as traditionally brewed alcohols including chang'aa

(d) Repeated viral infections in the throat.

(d) Hereditary predisposition. It is now thought that people from families where someone has died of cancer have a higher chance of

themselves having cancer.

(e) The presence of another cancer elsewhere in the body

(f) Any other disease that reduces the overall body immunity such as AIDS

• What you are calling itching may be a feeling of irritation in the lungs or the chest. The irritation could arise because one has breathed in volitant particles; or

Accordingly if you have an earache, visit your doctor now, for some of the causes are potentially dangerous. They could cause deafness. Still, the aching could be the only warning sign of a serious disease process

something to which they are allergic. Many lung infections will also cause irritation to the lungs and/or the lung coverings, called pleura. The commonest way in which such volitation presents is with cough. Such coughs

are usually dry and troublesome, but their desired function is to rid the lung of the volitant.

If you feel itchy in the lungs and instant coughing does not seem to ease the trouble, consult your doctor at once.

Once again thank you for raising such practical points for discussion, and I hope you will find some of these answers useful.

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brace. Heat and massage are effective in combating the pain and the muscle spasms accompanying acute episodes.

It must be pointed out that whatever the cause whatever the treatment, bone that has been lost cannot be replaced; and the deformities are difficult to undo. Patients who have already had a fracture inevitably remain at risk for more, so that treatment started in symptomatic patients cannot be judged to have failed just because symptoms continue and further trouble follows.

Osteoporosis represents a heterogeneous group of bone disorders, which may be related to and/or associated with several other systemic diseases. Its prevention depends on the causally associated factors. Where, as is commonly the case, decline in estrogen after menopause or removal of ovaries is the main factor, long term replacement of estrogen reduces the rate of bone loss. Calcium supplements also reduce the rate of bone loss. Physical inactivity encourages bone loss, and exercises should be encouraged in all persons.

Finally, I would like to reiterate that osteoporosis is a common problem in the elderly; that it is disabling, putting additional socioeconomic pressure on those affected and their relatives and friends. Although treatment is often seen to be unsatisfactory, each one of us can do something in the prevention of the disorder and in the management of the complication(s). Your understanding and cooperation shall make a definite difference. Start now.