

Where Do We Go From Here?

— DR ALAN TENENHOUSE PRINCIPAL INVESTIGATOR, MONTREAL

CaMos is now completing the fifth year of its original mandate. Thanks to the cooperation and enthusiastic support of all participants, and the diligence, hard work and devotion of the entire CaMos team the study has succeeded beyond anything we could reasonably expect and has become a landmark in osteoporosis research. Our accomplishments to date include establishment of Canadian reference standards for lumbar spine and hip bone densitometry, and for the SF-36, the most commonly used instrument for assessing health related quality of life. The prevalence of osteoporosis and osteopenia in Canadian men and women has been determined. A method for accurately measuring the extent of vertebral deformity from standard x-rays was developed. Using this method it was found that the prevalence of vertebral deformity (fracture) is the same in women and men over age 50 years. This finding was unexpected and suggests that risk of bone fragility and fracture, i.e. osteoporosis, is very similar in men and women.

It is clear that factors other than bone density are very important determinants of fracture risk. The completion of the five-year follow-up will provide the data necessary for the identification of these factors and the second five years of CaMos that begins January 2002 will provide the opportunity to develop preventive strategies for eliminating or neutralizing them. If we are as successful with this second phase of

CaMos as we were with the first, osteoporotic fractures in the elderly may eventually become a diminishing menace. With your continued cooperation I know we will succeed.

Where do we go from here? We continue CaMos until we have succeeded in freeing Canadian seniors from the threat of osteoporosis and fracture. ♦

The Influence of Osteoporosis Fractures on Quality of Life

— DR JOHNATHAN ADACHI CENTRE DIRECTOR, HAMILTON

A preliminary analysis of CaMos data has been completed and it was found that in women quality of life scores were lower in participants who had sustained osteoporotic fractures some time in the past compared with individuals who had never sustained a fracture. This difference was greatest when measuring physical function; the greatest decline in physical capacity was seen in those who had had hip and pelvis fractures. In men, our results indicated that once again physical functioning was most impacted by hip fractures.

An unexpected finding was that quality of life scores were lower in those participants who did not realize that they had sustained a fracture of the spine compared with individuals who had never fractured. These "silent" fractures are due to osteoporosis and although asymptomatic in the traditional sense, do have an adverse impact on health and quality of life. Finally, this analysis found no decrease in

quality of life in participants who had sustained fractures that were not a result of osteoporosis; i.e. osteoporotic fractures seem to have a greater negative impact on quality of life than fractures that result from severe trauma.

The conclusion is inescapable, the physical, emotional and psychological affects, and the increased pain resulting from hip, back, wrist/forearm, pelvis and rib fractures are outcomes of osteoporosis that have a very significant adverse effect on quality of life that persists for some time after the fracture has healed. ♦

Osteoporosis in Men

— **DR WOJCIECH OLSZYNSKI** CENTRE DIRECTOR, SASKATOON

Osteoporosis is considered a disease of women. Rarely do health professionals or patients consider osteoporosis in men, yet it is as important a determinant of fracture risk in men as in women. More than 2500 men are participating in CaMos providing a unique opportunity to study osteoporosis, fracture, and the risk factors of these diseases.

Although it was found that the prevalence of osteoporosis, as defined by the World Health Organization (WHO), in men ≥ 50 years is 5% compared to 16% in women of the same age, spine X-Rays revealed that the prevalence of vertebral deformity (fracture) is the same in both, approximately 25%.

This suggests that fracture risk in men is much greater than one would presume from bone mineral density (BMD) measurements of the lumbar spine. However, men with vertebral deformities exhibited lower BMD values of the femoral neck than those without deformities, that for males over 50 years, femoral neck BMD is more consistently associated with vertebral deformities than in spinal BMD. Older men (≥ 65 years) possessed significantly greater spinal BMD compared to younger men (age 50-64). This is almost certainly related to the greater prevalence of degenerative spinal changes in the elderly population. In conclusion, our results clearly establish that a significant proportion of men ≥ 50 years suffer from osteoporosis and vertebral deformity. Our data also provides strong support for the use of either total hip or femoral neck BMD measurements as the best predictors of vertebral fracture risk in men.

We have also examined the relationship of bone mineral density (BMD) to cigarette smoking and alcohol use in the men in the CaMos cohort. It was found that men who smoke have a lower bone density than men who do not with « heavy » smokers having a further decrease in BMD. It was interesting to see that moderate alcohol intake (up to two drinks of alcohol per day) is associated with an increased BMD. With bones as with the cardiovascular system smoking is a serious risk factor whereas moderate alcohol consumption appears to have some modest health benefit. ♦

CaMos Website

<http://www.camos.org>

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