Calcium Supplementation in Postmenopausal Women: Rethinking the Prescription

Madam, Maintaining calcium homeostasis is imperative for optimal bone health. This mineral equilibrium in the body is achieved through an intricate interplay of hormones. The years leading up to menopause are the harbinger of an estrogen deficient state in the body of a female. This translates into important implications for bone health; placing postmenopausal women at a higher risk of fragility fractures because of osteoporosis.

The Pakistani populace is observed to be Vitamin D deficient and hypocalcaemic; this trend being observed even among individuals of a younger demographic distribution. Women have generally shown a more severe deficiency than men. In view of the widespread calcium deficiency prevalent among the population, it has become a common practice to uniformly prescribe calcium to postmenopausal women for the prevention of osteoporosis in pursuit of universal recommendations of the same.

While calcium has been shown to be an effective treatment for osteoporosis in people over the age of 50 years and current guidelines for calcium intake recommend an amount of 1200 mg per day for such individuals as well, new emerging evidence incriminates calcium as a culprit in increasing cardiovascular morbidity and mortality in postmenopausal women. One recent randomized controlled trial reported a statistically significant increase in myocardial infarction in the calcium group (p=0.047). While these studies may have been fraught with some limitations and their results are not wholly unequivocal, they raise some concern about the safety profile of calcium supplementation in this age group. Meticulous risk assessment before starting calcium supplementation could therefore be advocated on the grounds that the importance of the deleterious effects of calcium supplementation on cardiovascular disease burden in postmenopausal women could parallel its beneficial effects on bone in these women. This holds immense relevance in our context because cardiovascular diseases form one of major slices of the disease burden of Pakistan.

Future studies are required to validate these findings in our setting as this new evidence places us on the horns of a dilemma. We must carefully locate the fulcrum where we are able to weigh the burden of cardiovascular diseases vis a vis osteoporotic fractures; the former now conjectured to have a link to widely and often indiscriminately prescribed calcium supplementation.

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Environmental health is an important component of any major undertaking. It requires an understanding of the complex relation between people and their physical, social and work environment and its effects on human health. In many cases, the issues are highly technical and require expert scientific, engineering, and medical or laboratory assistance. However, one of the major human undertakings for better or worse, is conflict and environmental health is no less than other components a major consideration to look at the affected society and the effect of conflict on the environmental health infrastructure.

The World Health Organization has defined environmental health to comprise those aspects of human health and disease that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health. But during conflict, measures to prevent diseases become a much more difficult task because of the multiple disruptions to environment and infrastructure, the release of toxic materials and the mass migration of populations. On the other side, environmental health services are provided protection under law but modern war claims the lives of more civilians than military personnel and is more disruptive of civilian populations than it is of military. The social dislocations and displacement; overcrowding and disruption of public health programmes, interferes with diseases eradication, vaccination campaigns, disruption of public/ environmental health infrastructures and breakdown of sanitary systems. Destruction of infrastructures providing water, food, fuel and sanitation are not widely acknowledged as a violation of human rights and are often not seen as environmental health concerns. Finally, indirect health related effects are no clear water, no sewage disposal, or destroyed electrical power generation and transmission capacity in all areas. This can lead to the rapid epidemic spread of water borne infectious diseases, diarrhoea, typhoid fever, cholera, destroyed civilian communication networks, and immobilized civilian communication with ministry of health. The consequences are increased mortality of civilians- especially infants and children.

It is imperative that civil defence include in its planning for conflict an appreciation of and contingency plans for environmental health services. These must be properly integrated into disaster and defence planning systems. Therefore, it is suggested that there must be proper integration, properly prepared plans and identified resources and personnel if the health consequences of conflict are to be minimized.

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References
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