epidemiological study, the response to questions is also determined by the type of questions asked.

12. Confirmatory tests: Although QUS was used as a screening test for osteoporosis, it has not been disclosed by the authors if the ladies were subjected to more accurate DEXA after a positive quantitative ultrasound examination to confirm the diagnosis. Was any treatment offered to ladies suffering from osteopenia or osteoporosis?

To conclude, there are serious methodological errors in this study with ethical concerns in form of conflict of interest. The role of quantitative ultrasound as a screening test for osteoporosis remains questionable in light of current evidence. The aim of doing such a study is not clear as effectiveness of interventions in asymptomatic populations is questionable.

REFERENCES

1. Nguyen T, Sambrook P, Eisman J. Bone loss, physical activity, and weight change in elderly women: the Dubbo Osteoporosis Epidemiology Study. *J Bone Mineral Res.* 1998;13(9):1458–1467.
2. Johnell O, Hertzman P. *What Evidence is there for the Prevention and Screening of Osteoporosis?* Copenhagen: WHO Regional Office for

Europe (Health Evidence Network Report); 2006. Available at: <http://www.euro.who.int/document/e88668.pdf>. Accessed on 18.05.13.

3. Sim MF, Stone M, Johansen A, Evans W. Cost effectiveness analysis of BMD referral for DXA using ultrasound as a selective pre-screen in a group of women with low trauma Colles' fractures. *Technol Health Care.* 2000;8(5):277–284.

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Reply

Dear Editor,

On behalf of the authors, I thank the readers for the deep interest and scholarly analysis of the article and for providing a well researched addendum which will help in my future endeavours. My reply is as below:

1. Conflict of interest: Agreed, potential conflict of interest does exist, howsoever author had been honest to mention the sponsorer. However sponsorer had already been supplying via valid contract calcium combination named "Shelcal" all over AFMS hospital.
2. Equipment used: The equipment used was a non-imaging water bath system which had been standardized before conduct of the camp. It is not possible to apply gold standard test as screening test especially if they are not cost effective and possess problems of easy availability, accessibility, portability, feasibility in camp scenario. It has been brought out in the study that calcaneal QUS is a potential screening tool for diagnosing osteopenia and osteoporosis in the background various merits; besides it is being used by various studies utilizing same WHO T-score.
3. Lack of adjustment for BMI: Point taken, however since weight or body mass of the individual had been found to be related to Bone Mineral Density in the available literature, therefore it was studied as one of the influencing factor.
4. Comparability to WHO standards: The author did mention about the DEXA based measurements and the comparability of the same with QUS method as well as about the application of WHO T-score in interpreting the results.
5. Screening test conducted in a not-at-risk population risk: It was felt more relevant to the study the age bracket

which is actually facing the crunch of child bearing as well as the household chores in the active years of life when the actual brunt of such silent diseases starts and the same has been mentioned in the discussion.

6. Recruitment bias: Agreed, and therefore the honesty on the part of author to disclose that these are the results of study done during the camp.
7. Pregnancy and lactation: Agreed, but howsoever only ladies with non-pregnant and non-lactating status were enrolled for the study.
8. Sampling errors: It is to be reiterated that the study results were based on the inputs from the camp. Therefore no calculation of sample sizes was been done. Only relevant exclusion criteria were applied before analyzing the results. Howsoever, the camp activities were genuinely and fruitfully been utilized as pivot for raising health awareness about prevention of falls and fractures arising out of low bone mass.
9. Cost-effectiveness: Probably, it is not possible to apply gold standard test as screening test especially if they are not cost effective, possess problems of easy availability, accessibility, portability, feasibility in camp scenario.
10. Important modifiable risk factors: Attention is drawn towards the various exclusion criteria considered in the study.
11. Agreed, the open-ended questionnaire was prepared and was recorded by author in the form of interview.
12. Confirmatory tests: Screening does conclude with presence or absence of disease entity in question as brought by this study. The end result remains guiding the clientele towards adopting healthy lifestyle especially the affected ones.

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A curious case of blocked catheter mount

Failure in properly checking the equipment is a factor in many critical events. Proper checking of equipment can help prevent equipment-related morbidity and mortality, improve preventive maintenance, and educate the critical care provider about equipment. Unfortunately, failure to perform a proper check before use is common.¹ 57-year-old male underwent a 15 h long surgery for mandibulectomy with tibial graft. He had an uneventful intra-operative period. Tracheostomy was done just before neuromuscular block was reversed. He was planned for partial ventilatory support overnight. The ventilator was checked and kept ready in the ICU. The patient suddenly developed respiratory distress when ventilator was connected to him. On auscultation the air entry at both inspiration and expiratory phase was reduced. His ventilatory parameters showed markedly decreased inspiratory and expiratory flow, increased airway resistance throughout the ventilatory cycle and raised airway pressures. Immediately the reason for this sudden crisis was sought and ventilatory circuit was subjected to a visual test. A paper-thin opaque block in the catheter mount was noticed only allowing tip of toothpick to go across the blocked mount (Figs. 1 and 2). The catheter mount was immediately changed, a cockpit drill was carried out and the patient was put back on ventilator. A re-look into the whole incident suggested that an accidentally dislodged catheter mount was replaced with the blocked one, without a repeat cockpit drill.

There are numerous reports of obstruction of anaesthesia breathing circuits by different foreign bodies.² In 2004 Scotland Yard conducted “Operation Orcadian”³ where they reported two hundred fifty seven incidences of mechanical problems leading to complications. They divided all the incidences into three categories.

Fig. 1 – Blocked catheter mount allowing only the tip of tooth-pick.

Fig. 2 – A schematic diagram showing the blocked catheter mount.

1. “soft” anaesthetic related – concerned with occlusions within the anaesthetic circuit (catheter mount, valve, mask, connector and endotracheal (ET) tube);
2. “hard” anaesthetic related – concerned with problems in the anaesthetic machine and other supporting equipment (used as part of the anaesthetic process);
3. other – concerned with malicious or reckless conduct and rule violation.

Soft cases constituted 61% of all the cases. Of these only 4 cases were analysed to be with manufacturing defect where the tube lumen was occluded/blocked. There has been no case report so far in literature, where there was a mechanical defect present. We recommend a complete cockpit drill to be conducted just before putting the patient on ventilator even if conducted earlier.

REFERENCES

1. Dorsch JA, Dorsch SE. Equipment checking and maintenance. In: Dorsch JA, Dorsch SE, eds. *Understanding Anaesthesia Equipment*. 5th ed. New Delhi: Lippincott Williams and Wilkins a Wolters Kluwer Business; 2008:931–954.
2. Foreman MJ, Moyes DG. Anaesthetic breathing circuit obstruction due to blockage of tracheal tube connector by foreign body—two cases. *Anaesth Intensive Care*. 1999;27:73–75.
3. *Protecting the Breathing Circuit in Anaesthesia and ICU. Report to the Chief Medical Officer of an Expert Group on Blocked Anaesthetic Tubing*. 2004:6–8.

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