
Peer Review File

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Reviewer Comment

Comment 1: First, I congratulate the authors for the valuable study on the subject.

Here are some suggestions for improving the article:

In the introduction, the rate of osteoporosis in the population of India is cited. As this is an article that covers the world's scientific population, I suggest that it is appropriate to include data regarding the prevalence of osteoporosis in men and women worldwide, and not just in the Indian population.

Reply 1: Thank you for the valuable suggestions. Worldwide prevalence has been included as per the comments.

Changes in the text:

Refer Page 7, Line 117 - According to estimates, osteoporosis affects more than 200 million individuals worldwide at the moment. The International Osteoporosis Foundation has released figures showing that 1 in 3 women over 50 and 1 in 5 men may have an osteoporotic fracture over their lifetimes.

Comment 2: In the Methods - Why was the word CBCT not included in the search strategy, since the word radiography was included?

Reply 1: The word CBCT was included in the search strategy

Changes in the text:

Refer Page 9, Line 160 - Articles related to the diagnosis of osteoporosis in women and mandibular bone changes were searched using keywords like ((bone) OR (mandible) OR (jaw)) AND ((dental radiograph) OR (orthopantomography) OR (CBCT)) AND (Osteoporosis).

Comment 3:

In the discussion it is reported that DEXA is laborious, I find it interesting to include a description of how this exam is performed and reference this description with current scientific articles.

Low-dose x-rays are used in DEXA. The DEXA scan comes in two varieties: The patient is made to lay on an upholstered table for regional DEXA. The most accurate technique to determine the risk of fractures, particularly hip fractures, is using a scanner that covers both the hip and lower spine. The density of the bones in your wrist, fingers, thigh, or heel is measured using Peripheral DEXA (p-DEXA) devices, which are smaller. The DEXA scan is not recommended for pregnant women. And, given the cost, not every patient has to have a DEXA scan if they are unaware that they are at risk or have the disease, since they can be assessed with pre-existing x-rays.

Furthermore, DEXA can be used for further validation and risk management in people who are at risk.

I think it is interesting to make it clear in this paragraph described below that radiography should not be requested for this purpose, but only use existing radiographs of patients for this diagnostic purpose. (Instead of having all patients tested for BMD, as osteoporosis can occasionally progress asymptotically, a dentist may use dental radiographs as a screening technique to refer the patient for a bone densitometry test.)

Reply 3: A description of how this exam is performed could not be included since it is beyond the scope of the study. This article mainly focuses on finding an alternative technique to DEXA. However other comments have been taken into account and changes have been done accordingly.

Changes in the text:

Refer Page 13, Line 249 - Despite being the best diagnostic method now available, DEXA is expensive and labor-intensive to screen osteoporotic patients.

Although BMD can be assessed everywhere on the body, two areas—the lumbar spine and the proximal femur—have been identified as more reliable and representative (8). Osteoporosis can occasionally progress asymptotically. Instead of having all patients tested for BMD, dentists may use dental radiographs as a screening technique to refer the patient for a bone densitometry test. Given the cost, it is not recommended for every patient to have a DEXA scan if they are unaware that they are at risk or have the disease since they can be assessed with pre-existing dental radiographs. Furthermore, DEXA can be used for further validation and risk management in people who are at risk. Hence, the current study aimed to evaluate the usefulness of existing dental radiographs for the diagnosis of osteoporosis in women.

Comment 4: I think it would be interesting to mention in the discussion that cancer patients who receive radiotherapy in the mandible may have altered bone density and be confused with this diagnosis of osteoporosis.

Therefore, I hope to have contributed to the improvement of the study.

Reply 4: Thank you for your feedback. It has definitely improved the quality of the study.

Changes in the text:

Refer Page 16, Line -326 - Patients with localized inflammation, other bone diseases, patients under medication, and radiotherapy may have altered bone density which should not be confused with osteoporosis. In the majority of the studies, these were considered as the exclusion criteria. General dental practitioners should always consider this while evaluating dental radiographs.