

**PANORAMIC RADIOGRAPH OBSERVATION  
OF TEMPOROMANDIBULAR JOINTS CONDYLE EROSION  
IN POST-MENOPAUSAL WOMEN  
WITH OSTEOPOROSIS**

**ABSTRACT**

**Background:** Panoramic radiograph is being used to see growth anomalies, pathologic conditions such as tumor and cyst, manifestation of systemic conditions, evaluate trauma that involving jaw bones, and to see changes that occur on temporomandibular joints as well. Osteoporosis that affects post-menopausal women can be seen on jaw bones and temporomandibular joints using panoramic radiograph. Change that occurs on temporomandibular joints can be in form of condyle erosion and then being observed using erosion scores by Helenius. **Purpose:** The aim of this study is to see the severity of temporomandibular joints condyle erosion in post-menopausal women with osteoporosis using panoramic radiograph. **Methods:** DXA examination was performed on 36 post-menopausal women. The result then divided 36 post-menopausal women into two groups, 18 post-menopausal women with osteoporosis as studied group and 18 post-menopausal women without osteoporosis as control group. Panoramic radiography was performed on all groups and the results were being observed to see the temporomandibular joints condyle erosion. Mann-Whitney Test was used to analyse the observation statistically. **Result:** As many as 86.1% samples from studied group experienced condyle erosion and as many as 61.11% samples from the control group experienced condyle erosion. Temporomandibular joint condyle erosion not only caused by osteoporosis, but osteoporosis could aggravate the erosion. **Conclusion:** Panoramic radiographs show that 86.1% post-menopausal women with osteoporosis experienced temporomandibular joint condyle erosion. There is no significant difference between temporomandibular joint condyle erosion in post-menopausal women with osteoporosis and post-menopausal women without osteoporosis.

**Keywords:** temporomandibular joints condyle erosion, osteoporosis, post-menopausal women, panoramic radiograph