OBJECTIVES:

Although several studies have addressed the relationship between systemic bone mineral status and the severity of periodontitis, there is little knowledge of the relationship between periodontal disease and locally detected bone mineral density. The aim of this study was to compare the mandibular bone mineral density of patients with chronic periodontitis with that of periodontally healthy subjects.

METHODS:

48 systemically healthy subjects were included in the study and underwent a periodontal examination to determine their status. 24 subjects were periodontally healthy and the other 24 had moderate or severe chronic periodontitis. The mandibular bone mineral density of the subjects was determined by dual energy X-ray absorptiometry. The region of interest on the body of the mandible was independently determined on the dual energy absorptiometry radiographs, and a computer calculated the bone mineral density of these regions.

RESULTS:

The mandibular bone mineral density of the subjects with periodontitis was significantly lower than that of the periodontally healthy subjects (p < 0.01). There were significant negative correlations between the mandibular bone mineral density values and parameters related to the amount of periodontal destruction.

CONCLUSIONS:

Low bone mineral density in the jaw may be associated with chronic periodontitis.