Mandibular bone mineral density in patients with Ehlers-Danlos syndrome may predict implant treatment failure

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The Ehlers-Danlos syndrome (EDS) is a hereditary disorder with several types that affect the connective tissue and collagen structures in the body. EDS patients are high risk for oral and mandibular disorders including implant failure. There is some evidence of peri-implant bone loss in EDS patients and its relationship with implant treatment failure. Here, we report that implant treatment failed in six EDS patients which were predictable only based on mandibular bone mineral densitometry (BMD). Longitudinal data before and after implant treatment were examined for 10 healthy (mean age 45.8±6.2 years) and 10 patients with EDS (mean age 42.9±7.1 years). All subjects had BMD measurements by dual energy X-ray absorptiometry (DEXA) at lumbar spine and hip as well as mandibular BMD by image processing of preapical radiography. Although there was no statistically significant difference in central BMD between EDS patients and healthy controls, mean mandibular body BMD values in the EDS patients were lower than control group. The lower mandibular BMD in EDS patients was associated with implant treatment failure. This is the first report on low mandibular BMD in EDS patients and its potential relationship with implant treatment failure in these patients. Further evaluation of mandibular BMD in individuals with EDS is needed to confirm the predictable value of mandibular BMD in implant treatment failure.