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INTRODUCTION

Fixed prosthetic overhanging restorations represent restorations that extend beyond the prepared tooth margins into the interdental space. These oversized margins favor plaque accumulation, compromise oral hygiene, and also contribute to gingival inflammation and periodontal destruction.

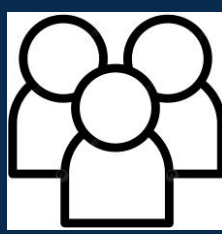
OBJECTIVE

The study aimed to evaluate alveolar bone loss in individuals with fixed prosthetic restorations presenting proximal overhangs utilizing orthopantomographic (OPG) analysis.

MATERIAL & METHOD

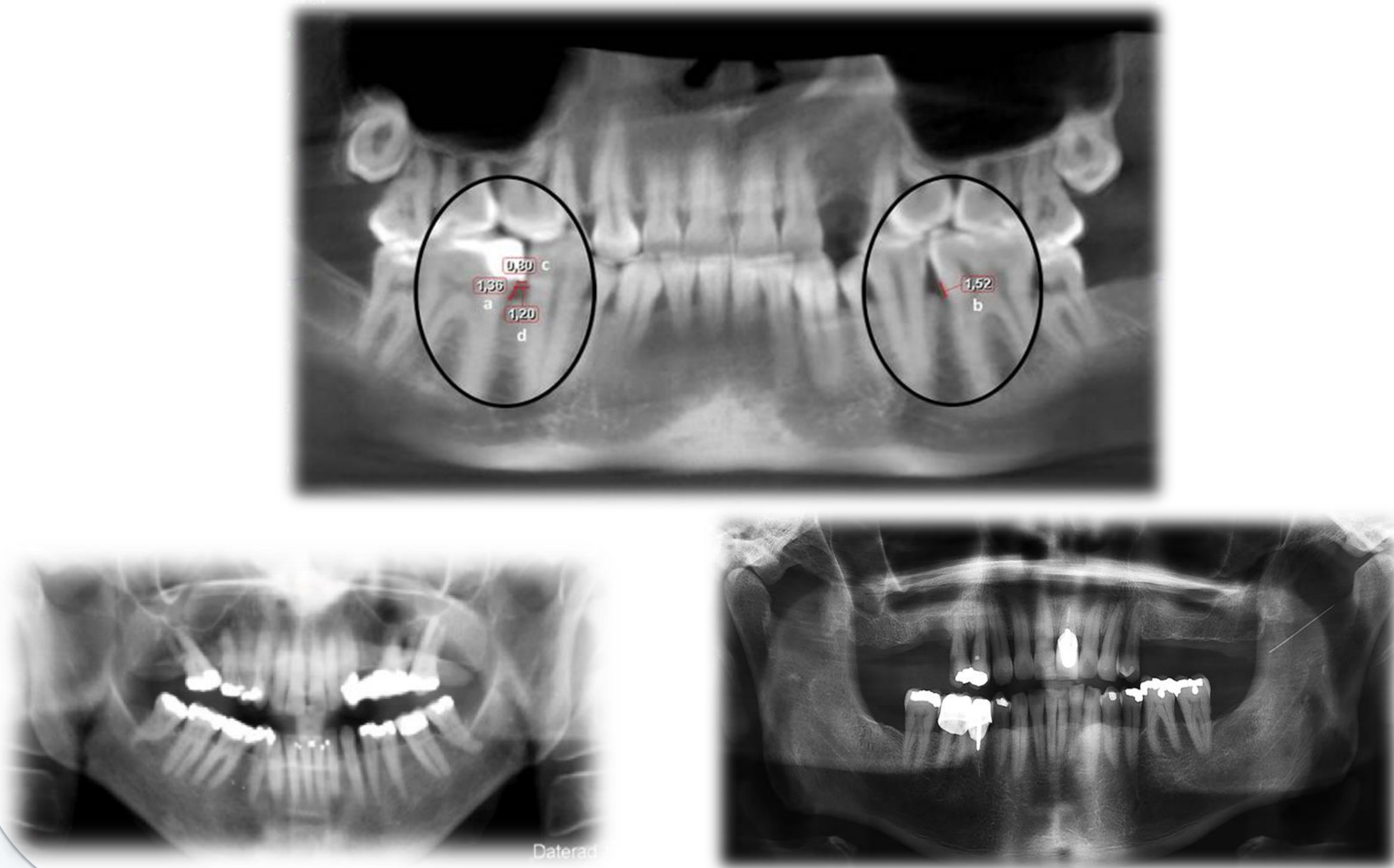
- Total number of OPGs analyzed: 115
- Bone loss measured as the distance between the cementoenamel junction (CEJ) and the alveolar limbus on two-dimensional OPG images.
- Measurements > 2 mm were considered pathological.
- When the CEJ was not clearly visible, the adjacent tooth served as a reference.
- Percentage of overhang occupying the interproximal space was calculated and classified as:

Small	$<20\%$
Moderate	$20-50\%$
Large	$>51\%$



115
ORTHOPANTOMOGRAMS
ANALYZED

MEASUREMENT ON OPG



RESULTS

The mean measured CEJ–alveolar limbus distance was 3.55 ± 0.77 mm. After subtracting the physiological 2 mm distance, the average bone loss associated with proximal overhang restorations was 1.86 ± 0.94 mm. Most patients (70.43%) exhibited moderate overhangs. Of particular concern, 9.56% of subjects presented large overhangs occupying more than half of the interdental space.

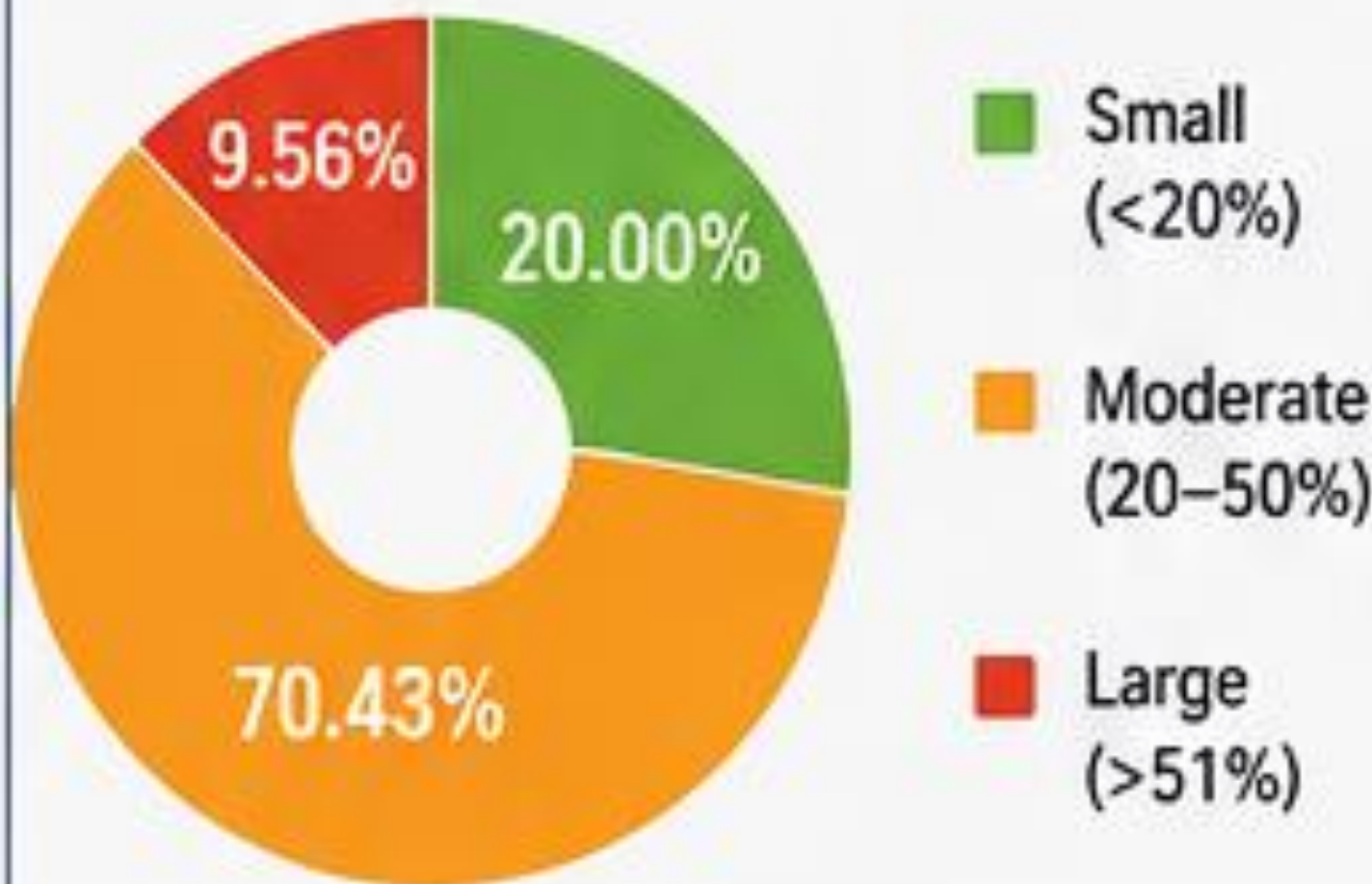
MEAN CEJ – ALVEOLAR
LIMBUS DISTANCE
 3.55 ± 0.77 mm



AVERAGE BONE LOSS
(After subtracting physiological 2 mm)
 1.86 ± 0.94 mm



DISTRIBUTION OF
OVERHANG SIZE



EXAMPLE CASES (OPG)

SMALL OVERHANG
($<20\%$)



MODERATE OVERHANG
($20-50\%$)



LARGE OVERHANG
($>51\%$)



Most patients (70.43%)
exhibited moderate
overhangs.



Of particular concern,
9.56% of subjects presented
large overhangs occupying
more than half of the
interdental space.

CONCLUSIONS

Our findings demonstrate that inadequately dimensioned fixed restorations contribute significantly to alveolar bone loss. The prevalence of large and moderate restoration overhanging suggests insufficient marginal adaptation. Ultimately, these overhanging restorations are directly correlated with the severity of periodontal disease, positioning them as a critical and avoidable iatrogenic factor in prosthodontics.