CHAPTER 6

Conclusions

The purposes of this study were to evaluate the three dimensions of interradicular areas and cortical bone thickness in Thai patients with either Class I or Class II skeletal patterns, and to compare those between Class I and Class II skeletal patterns by using Cone Beam Computed Tomography (CBCT).

The conclusions are presented as follows:

6.1 Mesiodistal distances (MD)

6.1.1 The greatest MD in the maxilla were between the second premolar and the first molar at 10-mm height, whereas the least were between the first and second molars in both Class I and Class II skeletal patterns. In the mandible, the greatest MD were between the first and second premolars and between the first and second molars, whereas the least were between the second premolar and the first molar in both skeletal patterns.

6.1.2 The MD tended to increase from the CEJ to the apex in both maxilla and mandible, except between the first and second molars in the maxilla of the patients with Class I skeletal pattern.

6.1.3 The MD between the first and second premolars and between the first and second molars, at all heights of measurement, of the mandible were greater than those of the maxilla in both Class I and Class II skeletal patterns.

6.1.4 In the maxilla, the MD between the first and second premolars at 10-mm height and between the first and second molars at 6 and 8-mm heights of the patients with Class II skeletal pattern were greater than those of the patients with Class I skeletal pattern. In the mandible, there was no significant

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difference in the MD between the patients with Class I and Class II skeletal patterns.

6.2 Buccolingual alveolar process widths (BL)

6.2.1 The greatest BL in the maxilla and mandible were between the first and second molars, whereas the least were between the first and second premolars in both Class I and Class II skeletal patterns.

6.2.2 The BL tended to increase from the CEJ to the apex and increased from the anterior to posterior regions in both maxilla and mandible and both Class I and Class II skeletal patterns.

6.2.3 In Class I skeletal pattern, the BL between the first and second premolars, between the second premolar and first molar, and between the first and second molars, at 2 and 4-mm heights, of the maxilla were greater than those of the mandible. In Class II skeletal pattern, the BL between the first and second premolars at 2 and 4-mm heights, between the second premolar and the first molar at 4, 6, 8 and 10-mm heights, and between the first and second molars at all heights of measurement of the maxilla were greater than those of the mandible.

6.2.4 In the maxilla, the BL between the first and second premolars at 2 and 4-mm heights and between the second premolar and the first molar at 2-mm height of the patients with Class I skeletal pattern were greater than those of the patients with Class II skeletal pattern. However, the BL between the first and second molars at 10-mm height of the patients with Class II skeletal pattern was greater than those of the patients with Class I skeletal pattern. In the mandible, the BL between the first and second molars at 4, 6, and 8-mm heights of the patients with Class I skeletal pattern were greater than those of the patients with Class II skeletal pattern.

6.3 Buccal cortical bone thickness (BC)

6.3.1 There was no significant difference in the buccal cortical bone thicknesses (BC) between the first and second premolars, between the second premolar and first molar, and between the first and second molars of, at all heights of

measurement in the maxilla. In the mandible, the greatest BC was between the first and second molars.

6.3.2 The BC tended to increase from the CEJ to the apex in both maxilla and mandible, in addition the BC in the mandible also tended to increase from the anterior to posterior regions.

6.3.3 The BC between the first and second premolars, between the second premolar and first molar, and between the first and second molars, at all heights of measurement, of the mandible were greater than those of the maxilla in both Class I and Class II skeletal patterns.

6.3.4 In the maxilla, the BC between the first and second premolars and between the second premolar and first molar, at 2-mm height, of the patients with Class I skeletal pattern were greater than those of the patients with Class II skeletal pattern. However, the BC between the second premolar and the first molar at 8-mm height of the patients with Class II skeletal pattern was greater than those of the patients with Class I skeletal pattern. In the mandible, there was no significant difference in the BC between the patients with Class I and Class II skeletal patterns.