

Anterior arch form-specific analysis of alveolar bone thickness and tooth inclination: Associations and clinical relevance in skeletal Class II malocclusion

Supplementary Information

Additional file 2

Table S1. Multiple regression analysis of alveolar bone thickness incorporating arch form, vertical skeletal pattern, and tooth inclination.

[illegible]

Ovoid	-0.06	0.61	-0.01	0.89	-0.30	0.11	-0.06	0.72	-0.02	0.93	0.45	0.36
	(-0.29, 0.17)		(-0.19, 0.16)		(-0.68, 0.07)		(-0.37, 0.26)		(-0.54, 0.50)		(-0.53, 1.42)	
Tapered	-0.30	0.01*	-0.08	0.35	0.10	0.60	-0.26	0.10	-0.03	0.90	0.53	0.28
	(-0.52, -0.07)		(-0.26, 0.09)		(-0.27, 0.47)		(-0.57, 0.05)		(-0.55, 0.48)		(-0.44, 1.49)	
Vertical skeletal pattern (ref: low-angle)												
Normal-angle	0.08	0.57	-0.04	0.66	0.23	0.29	-0.11	0.56	-0.55	0.07	-1.01	0.08
	(-0.19, 0.34)		(-0.24, 0.16)		(-0.20, 0.66)		(-0.47, 0.25)		(-1.15, 0.05)		(-2.13, 0.11)	
High-angle	-0.10	0.44	0.03	0.79	0.17	0.41	-0.25	0.15	-1.03	0.00*	-2.20	0.00*
	(-0.36, 0.16)		(-0.17, 0.22)		(-0.25, 0.59)		(-0.60, 0.10)		(-1.61, -0.44)		(-3.28, -1.11)	
Tooth inclination	0.00	0.79	-0.01	0.03*	0.01	0.10	-0.01	0.18	-0.04	0.00*	-0.11	0.00*
	(-0.01, 0.01)		(-0.02, 0.00)		(0.00, 0.03)		(-0.02, 0.01)		(-0.06, -0.01)		(-0.16, -0.07)	
R ²	0.14		0.09		0.09		0.12		0.26		0.38	
Canines VIF: ovoid-1.36, tapered-1.32, normal-angle-2.11, high-angle-2.13, tooth inclination-1.07												
Arch form (ref: square)												
Ovoid	-0.06	0.70	-0.12	0.24	-0.04	0.78	0.13	0.42	0.20	0.43	-0.07	0.93
	(-0.39, 0.27)		(-0.31, 0.08)		(-0.36, 0.27)		(-0.19, 0.44)		(-0.30, 0.70)		(-1.66, 1.52)	
Tapered	-0.39	0.02*	-0.38	0.00*	0.20	0.21	-0.15	0.34	-0.23	0.37	-0.82	0.30
	(-0.72, -0.06)		(-0.57, -0.18)		(-0.12, 0.51)		(-0.46, 0.16)		(-0.73, 0.27)		(-2.41, 0.76)	
Vertical skeletal pattern (ref: low-angle)												
Normal-angle	0.02	0.91	0.03	0.80	0.02	0.94	-0.31	0.10	-0.59	0.05	-0.03	0.97
	(-0.37, 0.42)		(-0.20, 0.26)		(-0.36, 0.39)		(-0.68, 0.06)		(-1.19, 0.01)		(-1.93, 1.87)	
High-angle	-0.27	0.18	-0.01	0.94	-0.15	0.43	-0.49	0.01*	-1.21	0.00*	-0.96	0.31
	(-0.65, 0.12)		(-0.24, 0.22)		(-0.52, 0.22)		(-0.86, -0.12)		(-1.80, -0.62)		(-2.84, 0.91)	
Tooth inclination	0.00	0.70	-0.01	0.23	0.02	0.01*	0.00	0.71	-0.01	0.57	-0.10	0.03*
	(-0.02, 0.02)		(-0.02, 0.00)		(0.01, 0.04)		(-0.01, 0.02)		(-0.04, 0.02)		(-0.19, -0.01)	
R ²	0.14		0.18		0.10		0.12		0.22		0.18	

B, partial regression coefficient; VIF, variance inflation factors; R^2 , model fit indices; CI, confidence interval; L3, labial alveolar bone thickness at 3 mm apically from the CEJ to the root apex level; L6, labial alveolar bone thickness at 6 mm apically from the CEJ to the root apex level; La, labial alveolar bone thickness at the root apex level; P3, palatal alveolar bone thickness at 3 mm apically from the CEJ to the root apex level; P6, palatal alveolar bone thickness at 6 mm apically from the CEJ to the root apex level; Pa, palatal alveolar bone thickness at the root apex level.

*Statistically significant ($P < 0.05$).