Table S1: Summary of studies comparing the treatment efficiency between conventional brackets and self-ligating brackets

Author	Study design	Number of Patients	Participants	Age (years)	Measurement	Treatment duration (Mean ± SD)	Result of statistical tests (p-values)
Pandis et al. 2007	CCT	n=54	• G1: CB, 0.022'' (Microarch) (n= 27) • G2: SB, 0.022'' (Damon2) (n= 27)	Mean age (SD): G1: 13.92 (1.43) G2: 13.48 (1.31)	• Rate of alignment	• G1: 114.51±46.44 days • G2: 91.03±31.94 days	No significant difference (p=0.06)
Scott et al. 2008	RCT	n=60	• G1: CB (Synthesis) (n= 28) (9 F, 19 M) • G2: SB (Damon3) (n= 32) (20 F, 12 M)	Mean age: G1: 16.38 G2: 16.19	• Rate of alignment	• G1: 243±82.5 days • G2: 253±63.6 days	No significant difference
Fleming et al. 2010	RCT	n=54	• G1: CB (Victory) (n= 26) (19 F, 7 M) • G2: SB (SmartClip) (n= 28) (17 F, 11 M)	Mean age (SD): G1: 15.48 (2.38) G2: 16.11 (2.74)	• Treatment duration • Total number of visits	• G1: 18.32±4.66 months • G2: 21.41±8.44 months	No significant difference for treatment duration (p=0.076), no sign. difference in number of visits
DiBiase et al. 2011	RCT	n=48	• G1: CB (Synthesis) (n= 21) (9 F, 20 M) • G2: SB (Damon3) (n= 27) (21 F, 12 M)	Mean age (SD): G1: 16.38 (5.28) G2: 16.19 (3.68)	• Treatment duration • Number of visits • Occlusal outcome	• G1: 23.00±4.86 months • G2: 24.48±6.72 months	No significant difference for treatment duration (p=0.992), No significant difference for no of visits
Johansson and Lundstrom 2012	RCT	n=90	• G1: CB (Gemini) (n= 46) (33 F, 13 M) • G2: SB (Time2) (n= 44) (31 F, 13 M)	Age range: 11.7 to 18.2	• Overall treatment time • Number of visits	• G1: 18.2±6.56 months • G2: 20.4±5.97 months	No significant difference for treatment duration and no. of visits
Songra et al. 2014	RCT	n=98	• G1: CB, 0.022'' (Omni) (n= 20) • G2: passive SB, 0.022'' (Damon 3MX) (n=41) • G3: active SB, 0.022'' (InOvation R) (n=37)	Age range:	• Labial segment alignment • Space closure	• G1: 251±107 days • G2: 422±124 days • G3: 399±107 days	No significant differences
Wahab et al. 2014	RCT	n=29	• G1: CB (Ormco) (n= 15) (10 F, 5 M) • G2: SB (Damon3) (n= 14) (11 F, 3 M)	Mean age: G1: 19.5 ± 3.9 G2: 21.9 ± 3.6	• Rate of alignment • Crowding alleviation	T0-T1: G1 (mm) 4.95±2.58; G2 (mm) 1.94±3.07 T1-T2: G1 (mm) 5.35±2.27; G2 (mm) 2.13±3.01	Differences in treatment time: T0-T1: p = 0.085 T1-T2: **p < 0.05** T2-T3: p = 0.326 T3-T4: p = 0.793

Author	Study design	Number of Patients	Participants	Age (years)	Measurement	Treatment duration (Mean ± SD)			Result of statistical tests (p-values)
						T2-T3	1.57±1.22	0.94±1.31	Crowding alleviation showed a higher percentage with G2 (98%) compared with G1 (67%).
						T3-T4	1.14±2.39	0.99±0.65	
O'Dywer et al. 2016	RCT	n=137	• G1: CB (Victory) (n=71) (42 F, 29 M) • G2: SB (SmartClip) (n=66) (43 F, 23 M)	Mean: G1: 14 years 6 months G2: 15 years 6 months	Treatment duration	• G1: 25.80 (months) • G2: 25.12 (months)			No sign. differences with regard to the number of visits and overall treatment time
Jung 2021	CCT	n=134	• G1: CB, 0.022'' (Clarity) (n=68) • G2: SB, 0.022'' (Clippy) (n=66)	Average age: 22.73	Treatment duration	• G1: 29.25±7.53 (months) • G2: 27.98±7.10 (months)			No significant difference

abbreviations: CB – Conventional bracket; CCT – Controlled clinical trial; F – Female; G1 – Group 1; G2 – Group 2; G3 – Group 3; M – Male; mm – millimeter; n – number of patients; NR – not reported, RCT – Randomized controlled trial; SB – Self-ligating bracket; SD – Standard Deviation; T0 – Pretreatment; T1 – first month review; T2 – Second month review; T3 – Third month review; T4 – Fourth month review

Table S2: Summary of studies comparing the rate of root resorption between conventional brackets and self-ligating brackets

Author	Study design	No. of Patients	Groups	Age (years) Mean ±SD	Evaluated Teeth	Assessment method	Duration of treatment	Root resorption (Mean ±SD)	Outcome of significance test
Scott et al. 2008	RCT	n=60	• G1: CB, 0.022'' (Synthesis) (n=28) (9 F, 19 M) • G2: SB, 0.022'' (Damon3) (n=32) (20 F, 12 M)	G1: 16.38 ± 5.28 G2: 16.19 ± 3.68	Mn right central incisor	PA	G1: 8.1±2.7 months G2: 8.5±2.1 months	EARR (mm) • G1: 1.21 ±3.39 • G2: 2.26 ±2.63	No significant difference
Pandis et al. 2008	CCT	n=96	• G1: CB, 0.022'' (Microarch) (n=48) (36 F, 12 M) • G2: SB, 0.022'' (Damon 2) (n=48) (31 F, 17 M)	G1: 13.14 ± 1.73 G2: 13.29 ± 1.57	• Mx incisors • Mn incisors	OPG	G1: 25.97 ± 6.65 months G2: 26.89 ± 5.94 months	EARR (mm) • Mx incisors: 1.23 ±0.97 • Mn incisors: 1.36 ±0.90	No significant difference
Leite et al. 2012	RCT	n=19	• G1: CB, 0.022'' (3M Unitek) (n = 8) (6 F, 2 M) • G2: SB, 0.022'' (Easyclip) (n = 11) (5 F, 6 M)	Mean: 20.6 Range: 11–30	• Mx central incisor • Mx lateral incisor • Mn central incisor • Mn lateral incisor	CBCT	6 months	EARR (mm) • Mx central incisor: G1: 0.33 ± 0.19 G2: 0.34 ± 0.24 • Mx lateral incisor: G1: 0.44 ± 0.33 G2: 0.43 ± 0.33 • Mn central incisor: G1: 0.31 ± 0.21 G2: 0.39 ± 0.52 • Mn lateral incisor: G1: 0.40 ± 0.24 G2: 0.23 ± 0.23	No significant difference
Jacobs et al. 2014	CCT	n=213	• G1: CB, 0.022'' (Victory) (n= 74) (51 F, 23 M) • G2: SB, 0.022'' (Smart clip)	Mean: 12.4 ± 2.2	• Mx incisors • Mn incisors	OPG	G1: 18.1±5.3 months G2: 20.7±4.9 months	• rRR (%) G1: 4.5 ±6.6; G2: 3.0 ±5.6	No significant difference

Author	Study design	No. of Patients	Groups	Age (years) Mean ±SD	Evaluated Teeth	Assessment method	Duration of treatment	Root resorption (Mean ±SD)	Outcome of significance test
			(n=139) (83 F, 56 M)						
Chen et al. 2015	CCT	n=70	• G1: CB, 0.022'' (3M Unitek) (n= 35) (19 F, 16 M) • G2: SB, 0.022'' (Damon 3) (n= 35) (18 F, 17 M)	G1: 13.42 ±2.50 G2: 13.52 ±2.84	• Mx central incisor • Mx lateral incisor • Mn central incisor • Mn lateral incisor	PA	Mean ±SD: G1: 20.34 ± 3.40 months G2: 20.53 ± 3.62 months	EARR (mm) • Mx central incisor: G1: 0.5 ±0.3; G2: 0.3 ±0.4 • Mx lateral incisor: G1: 0.3 ±0.5; G2: 0.2 ±0.3 • Mn central incisor: G1: 0.4 ±0.5; G2: 0.4 ±0.4 • Mn lateral incisor: G1: 0.3 ±0.5; G2: 0.3 ±0.3	No significant differences
Handem et al. 2016	CCT	n=52	• G1: CB, 0.022'' (Roth) (n= 27) (13 F, 14 M) • G2: SB, 0.022'' (Damon) (n= 25) (12 F, 13 M)	Mean age range: G1: 16.77-18.47 G2: 16.04-18.06	• Mx central incisor • Mx lateral incisor • Mn central incisor • Mn lateral incisor	PA	Mean: G1: 1.70 years G2: 2.02 years	EARR (mm) • Mx right central incisor: G1: 0.59; G2: 0.72 • Mx right lateral incisor: G1: 0.70; G2: 0.72 • Mx left central incisor: G1: 0.66; G2: 0.88 • Mx left lateral incisor: G1: 0.74; G2: 0.80 • Mn right central incisor: G1: 0.66; G2: 0.64 • Mn right lateral incisor: G1: 0.40; G2: 0.48 • Mn left central incisor: G1: 0.62; G2: 0.60 • Mn left lateral incisor: G1: 0.55; G2: 0.56	No significant difference

Aras et al. 2018	RCT	n=32	• G1: CB, 0.022'' (Titanium Orthos) (n= 16) (10 F, 6 M)	Average:
				G1: 14.94 ±1.06
					• Central incisors
					• Lateral incisors
						CBCT	9 months	Volumetric changes (mm^3)
								• Central incisor:
								  ○ G1: 28.29 ±13.48
								  ○ G2: 27.08 ±12.71
								• Lateral incisor:
									No significant difference

Author	Study design	No. of Patients	Groups	Age (years) Mean ±SD	Evaluated Teeth	Assessment method	Duration of treatment	Root resorption (Mean ±SD)	Outcome of significance test
			• G2: SB, 0.022'' (Damon Q) (n= 16) (12 F, 4 M)	G2: 15.00 ±1.03				○ G1: 18.77 ±11.05 ○ G2: 20.32 ±11.67	
Qin and Zhou 2019	RCT	n=98	• G1: CB, 0.019'' (3M Unitek) (n= 49) (23 F, 26 M) • G2: SB, 0.019'' (Damon 3) (n= 49) (24 F, 25 M)	G1: 15.15 ±4.52 G2: 15.21 ±4.43	• Mx central incisors • Mx lateral incisors	OPG	M ±SD: G1: 20.25 ±5.11 months G2: 22.10 ±5.15 months	EARR (mm) • Mx right central incisor: G1: 0.40 ±0.28 G2: 0.32 ±0.24 • Mx right lateral incisor: G1: 0.30 ±0.25 G2: 0.27 ±0.28 • Mx left central incisor: G1: 0.39 ±0.31 G2: 0.33 ±0.27 • Mx left lateral incisor: G1: 0.31 ±0.26 G2: 0.28 ±0.25	No statistically significant difference

abbreviations: CB – Conventional bracket; CBCT – Cone Beam Computed Tomography; CCT – Controlled clinical trial; EARR – External apical root resorption; F – Female; G1 – Group 1; G2 – Group 2; M – Male; Mn – Mandibular; Mx – Maxillary; mm – millimeter; n – number of patients; OPG – Orthopantomography; PA – Periapical Radiograph; RCT – Randomized controlled trial; rRR – relative root resorption; SB – Self-ligating bracket; SD – Standard Deviation;

Table S3: Summary of studies comparing the level of pain between conventional brackets and self-ligating brackets

Author	Study design	No. of Patients	Participants	Age (years)	Assessment method	Pain level			Outcome of significance tests
Miles et al. 2006	CCT, split-mouth	n=58 (40 F, 18 M)	G1: • Mn right quadrant: SB, (Damon2) • Left quadrant: CB, (Victory) • (n=29) G2: • Mn right quadrant: CB, (Victory) • Left quadrant: SB (Damon2) • (n=29)	Average age: 16.3 (10.5 – 46.5)	VRS (Comparing left and right, which side is more painful)		SB n (%)	CB n (%)	1-2 d**: p = .04** untying: p = .56 tying: **p = .004**
						days 1-2	2 (3.4)	9 (15.5)	
						untying	7 (12.1)	5 (8.6)	
						tying	21 (36.2)	6 (10.3)	
Scott et al. 2008	RCT	n=62	• G1: CB (Synthesis) (n=29) (9 F, 20 M) • G2: SB (Damon3) (n=33) (21 F, 12 M)	Mean age: 16 years 3 months	VAS (0-100mm) • 4 hours • 24 hours • 3 days • 1 week		G1	G2	No significant difference
						4 hours	60.11±23.3	63.67±23.18	
						24 hours	57.44±24.24	58.3±20.74	
						3 days	38.19±26.43	42.94±23.08	
						1 week	15.11±20.32	15.12±14.32	
Pringle et al. 2009	RCT	n=52	• G1: CB (Tru Straight) (n=28) (13 F, 15 M) • G2: SB (Damon3) (n=24) (15 F, 9 M)	Mean age (SD): G1: 16.1 (7.4) G2: 15.2 (6.8)	VAS (0-10cm) Twice a day, over 7 days	Mean MPI: • G1: 55.71 mm (95% CI, 45.93-65.50 mm) • G2: 40.92 mm (95% CI, 30.40-51.44 mm) • G2 reported lower mean MPI (difference, 11.77 mm; 95% CI, –0.15-23.68 mm) than did the G1			• Mean maximum pain intensity: P = 0.053 • Mean pain intensity: **P = 0.012**
Fleming et al. 2009	RCT	n=48	• G1: CB (Victory) (n=22) (16 F, 6 M) • G2: SB (SmartClip) (n=26) (16 F, 10 M)	Mean age: G1: 15.65±2.1 G2: 16.23±2.91	VAS (0-100 mm) • 4 hours • 24 hours • 3 days • 7 days • Archwire removal • Archwire insertion		G1	G2	at 4 hours (p = .958), 24 hours (p = .289), 72 hours (p = .569), and 7 days (p = .756) wire removal (**p = .001**), wire insertion (**p = .013**)
						4 hours	46.43±24.07	46.81±24.41	
						24 hours	67.7±17.83	61.46±25.35	

Author	Study design	No. of Patients	Participants	Age (years)	Assessment method	Pain level			Outcome of significance tests
						3 days	46.45±24.15	42.58±23.87	
						7 days	18.52±18.31	17.08±16.47	
						Archwire removal	15.52±14.3	33.65±21.8	
						Archwire insertion	19.74±17.53	38.02±27.47	
Tecco et al. 2009	CCT	n=30	• G1: CB (Victory) (n=15) (8 F, 7 M) • G2: SB (Damon SL II) (n=15) (10 F, 5 M)	Mean age: G1: 16.9 ± 3.8 G2: 16.4 ± 4.5	VAS (0-100mm) Each evening from placement of the first archwire for 3 months		G1 mean (SD)	G2 mean (SD)	Significant differences: • Day 1 (**p <0.05**) • Day 3 (**p<0.05**)
						Day 1	52 (45.07)	42 (20.25)	
						Day 3	50.3 (34.93)	18.83 (16.50)	
Miles and Weyant 2010	RCT	n=60	• G1: CB (Clarity) • (n=30) (19 F, 11 M) • G2: SB, (InOvation C) (n=30) (19 F, 11 M)	Mean age: 13.5+1.5	7-point Likert scale • 4 hours • 24 hours • 3 days • 1 week	Time	G1 Mean (SD)	G2 Mean (SD)	P-Value showed no significant differences • 4 hours: 0.42 • 1-day: 0.33 • 3-days: 0.87 • 7-days: 0.29 • Total: 0.90
						4 hours	2.4 (1.1)	2.8 (1.5)	
						1-day	3.9 (1.7)	3.4 (1.8)	
						3-days	2.4 (0.9)	2.5 (1.5)	
						7-days	1.3 (0.6)	1.6 (1.1)	
						Total	10.1 (3.2)	10.2 (5.2)	
Bertl et al. 2013	CCT, split-mouth	n=18 (15 F, 3 M)	SB: (SmartClip) CB: (AO) • G1: SB on left side and CB on the right (n=11) • G2: SB on right side and CB on the left (n=7)	Mean age: 22.2±6.4	NRS (0 – 10) • Archwire engagement • Archwire disengagement	NRS Scores (SB minus CB)			• Treatement: not significant (p = 0.21) • archwire disengagements (**p = .027**), SB was more painful
						Archwire Engagement		Archwire Disengagement	
						Mean (SD)	95% CI	Mean (SD)	95% CI
						0.97 (2.25)	-0.15 (2.08)	1.04 (1.87)	0.10 (1.97)
						1.55 (2.63)	-0.33 (3.43)	1.60 (3.27)	-0.74 (3.94)
Atik and Ciger 2014	RCT	n=33	• G1: CB (Forestadent) (n=17, all F)	Mean age: G1: 14.5±1.2	VAS (0-100 mm) • 24 hours • 3 days	G1 (mean (CI95%)) •24 h: 1.7 (0.2-2.8) •3 d: -2.1 (-4.8 – 0.1)		G2 •24 h: 1.3 (0.3 - 2.8) •3 d: -2.1 (-5.5 – -1.1)	Intergroup diff: 24 h: p = 0.465 3 d: p = 0.363

Author	Study design	No. of Patients	Participants	Age (years)	Assessment method	Pain level	Outcome of significance tests
			• G2: SB, (Damon3): (n=16, all F)	G2: 14.8±1.0	• 1 week • 1 month	•7 d: -1.9 (-3.9 – -0.2) •30 d: -0.8 (-1.6 - -0.1) •7 d: -1.9 (-3.9 – -0.0) •30 d: 0 (-0.8 - 0.0)	7 d: p = 0.763 30 d: p = 0.709
Rahman et al. 2016	RCT	n=113	• G1: CB (Victory) (n=60) (38 F, 22 M) • G2: SB (SmartClip) (n=53) (34 F, 19 M)	Mean: G1: 14 years 5 months G2: 15 years 4 months	VRS (none, mild, moderate, severe) • Day 1 • Day 3 • Day 5	• Pain scores - teeth > soft tissues • most pain encountered on day 1 • G2 – more discomfort (engaging/disengaging archwires)	No significant difference
Lai et al. 2019	RCT	n=88	• G1: CB (OPA-K): (n=44) (25 F, 19 M) • G2: SB (Damon Q): (n=44) (27 F, 17 M)	Median age: G1: 19.5 G2: 19.0	VAS (0-100mm) • Primary outcome: 24 h (baseline) after bracket bonding • Secondary outcome: 4 h, 3 days, 1 week and 1 month after bracket bonding	Estimate = 3.09. SE = 3.22	No significant difference (p = 0.34)
González-Sáez et al. 2021	RCT	n=90	• G1: CB (Diamond+) (n=30) (19 F, 11 M) • G2: SB (Bio-smile): (n=30) (19 F, 11 M) • G3: low-friction CB (Synergy): (n=30) (18 F, 12 M)	Mean ±SD: G1: 20.4±5.9 G2: 22.7±7.2 G3: 22.1±9.2	VAS (0-10cm) • 4 hours after BB (T1) • 8 hours after BB (T2) • 24 hours after BB (T3) • 2 days after BB (T4) • 3 days after BB (T5) • 4 days after BB (T6) • 5 days after BB (T7) • 6 days after BB (T8) • 7 days after BB (T9)	○ G3 being the one showing the highest pain values at time points (T1: 3.2 ± 3, T2: 3.8 ± 3.1, T7: 1.9 ± 2.3, T8: 1.7 ± 2.4, T9: 1.2 ± 2.3) ○ maximum peak at 24 hours in G1 (4.5 ± 2) followed by G3 (4.0 ± 2.9) and, at 48 hours, by G2 (3.4 ± 1.7)	No significant difference between G1 and G2 Only G3 showed significant difference in pain: • p < 0.01 in T1, T7 and T9 vs. G1 & G2 • p < 0.05 in T2 and T8 vs. G1 & G2

abbreviations: 95% CI – 95% confidence interval; BB _ bracket bonding; CB – Conventional bracket; CCT – Controlled clinical trial; F – Female; G1 – Group 1; G2 – Group 2; M – Male; mm – millimeter; Mn – Mandibular; MPI – Maximum pain intensities; n – number of patients; NRS – Numeric rating scale; RCT – Randomized controlled trial; SB – Self-ligating bracket; SD – Standard Deviation; SE – Standard error; VAS – Visual analog scale; VRS – Verbal rating scale

Table S4: Summary of studies comparing the periodontal status between conventional brackets and self-ligating brackets

Author	Study design	Number of Patients	Participants	Age (years)	Measured Periodontal Index				Additional comments
					PI	GI	PD	BOP	

Baka et al. 2013	CCT, Split mouth	n=20 (M)	• CB (Dentaurum) with steel ligature
			• SB (DamonQ)
			  • G1: CB in the Mx right and Mn left dentitions and SB in the Mx left and Mn right dentitions (n=10)
			  • G2: SB in the Mx right and Mn left dentitions and CB in the Mx left and Mn right dentitions (n=10)
				Mean age: 14.2 ± 1.5	Yes
					• G1: 1.37±0.34
					• G2: 1.16±0.38
					• P = 0.091
						No	Yes
							• G1: 0.68±0.32
							• G2: 0.72±0.31
							• P = 0.882
								Yes
								• G1: 38.00±14.53
								• G2: 37.84±15.87
								• P = 0.871	

Atik and Ciger 2014	RCT	n=33 (F)	• G1: CB (Forestadent) (n=17) • G2: SB (Damon3) (n=16)	Mean age: G1: 14.5 ± 1.2 G2: 14.8 ± 1.0	Yes • G1: 0.23±0.52 • G2: 0.17±0.45 • P value: 0.746	Yes • G1: -0.08±0.62 • G2: 0.16±0.39 • P value: 0.201	Yes • G1: 0.25±0.35 • G2: 0.12±0.27 • P value: 0.286	No	
Nalcaci et al. 2014	RCT	n=46	• G1: CB (Mini Taurus) with elastomeric ligatures (n=23) (13 F, 10 M) • G2: SB (DamonQ) (n=23) (11 F, 12 M)	Mean age: G1: 13.30 ± 1.61 G2: 14.48 ± 1.27	Yes • G1: 0.60±0.06 • G2: -0.60±0.07 P = 0.967	Yes • G1: -0.63±0.67 • G2: 0.48±0.07 • P = 0.141	No	Yes • G1: -0.11±0.008 • G2: 0.11±0.11 P = 0.092	G1 with elastomeric ligatures – increase in halitosis with the accretion of plaque accumulation
Uzuner et al. 2014	RCT	n=40	• G1: CB (OPAL) with stainless steel ligature (n=20) (15 F, 5 M) • G2: SB (Leone) (n=20) (16 F, 4 M)	Mean age (SD): G1: 15.05 ± 0.97 G2: 14.67 ± 1.06	Yes Median (Min-Max) • G1: 0.93 (0.00-3.20) • G2: 1.00 (0.09-3.20)	Yes Median (Min-Max) • G1: 0.61 (0.09-2.10) • G2: 1.02 (0.12-2.70)	Yes Median (Min-Max) • G1: 2.20 (1.10-3.50) • G2: 3.00 (1.23-3.50)	No	

Author	Study design	Number of Patients	Participants	Age (years)	Measured Periodontal Index				Additional comments
					PI	GI	PD	BOP	
					• P = 0.069	• **P = 0.028**	• P = **0.007**		
Folco et al. 2014	CCT	n=22	• G1: CB (Synthesis) with elastomeric ligatures (n=23) (13 F, 10 M) • G2: SB (Damon3) (n=11) (11 F, 12 M)	16 to 30	Yes p > 0.05	Yes p > 0.05	Yes p > 0.05	No	

Cardoso et al. 2015	CCT, Split mouth	n=16	• CB (Kirium) with metallic ligature
			• SB (Portia)
			  • G1: CB on the lower dental arch and SB on the upper arch (n=8)
			  • G2: SB in the lower arch and CB in the upper arch (n=8)
				12 to 16	Yes
					• G1: 1.38±0.68
					• G2: 1.48±0.85
					• P > 0.05
						No	Yes
							• G1: 2.01±0.53
							• G2: 2.05±0.52
							• P > 0.05
								Yes
								• G1: 0.93±1.03
								• G2: 0.73±0.59
								• P > 0.05	

Kaygisiz et al. 2015	RCT	n=60 (28 F, 32 M)	• G1: CB (Avex) ligated with steel ligatures (n=20) • G2: SB (Leone) (n=20) • G3: control group (treatment started at the end of the study) (n=20)	Mean age (SD): G1: 14 (1.01) G2: 14.7 (1.39) G3: 14.4 (1.46)	Yes • G1: 0.78±0.52 • G2: 0.81±0.43 • G3: 0.63±0.71 • P = 0.837	Yes • G1: 0.38±0.35 • G2: 0.58±0.52 • G3: 0.47±0.51 • P = 0.346	Yes • G1: 1.42±0.30 • G2: 1.46±0.23 • G3: 1.63±0.54 • P = 0.067	Yes • G1: 2.11±0.94 • G2: 2.34±0.56 • G3: 1.97±0.73 • P = 0.286	
Chhibber et al. 2017	RCT	n=61	• G1: Clear aligner (Invisalign) (n=24) • G2: SB (Carriere) (n=17) • G3: CB (Carlsbad) with elastomeric ligatures (n=20)	Mean age: G1: 16.56 ± 3.99 G2: 15.39 ± 3.54 G3: 14.56 ± 3.92	Yes • G1: 0.92±0.58 • G2: 1.07±0.59 • G3: 1.32±0.67 • P > 0.05	Yes • G1: 0.75±0.53 • G2: 1.00±0.65 • G3: 1.32±0.67 • P > 0.05	No	Yes • G1: 0.46±0.72 • G2: 0.73±1.1 • G3: 0.84±1.01 • P > 0.05	

abbreviations: BOP – Bleeding on probing; CB – Conventional bracket; CCT – Controlled clinical trial; F – Female; G1 – Group 1; G2 – Group 2; G3 – Group 3; GI – Gingival index; M – Male; Mn – Mandibular; Mx – Maxillary; n – number of patients; PD – Probing depth; PI – Plaque index; RCT – Randomized controlled trial; SB – Self-ligating bracket; SD – Standard Deviation