

## Supplementary materials

**Table S1.** Different conventional approach to treat SB in growing patients, according to literature review.

Author and year of publication	Title	Sample	Etiology	Treatment	Conclusion
King J. et al, 2004 [20]	"Unilateral Brodie bite treated with distraction osteogenesis"	♀ 11Y and 10M SB- left side (24,25,26/34,35,36) <b>Other associated problems:</b> Convex profile without facial asymmetry	SB- skeletal (mandible) Right molar and canine Class I Skeletal Class II, hyperdivergent	<b>Maxilla:</b> fixed appliance + full coverage maxillary appliance <b>Mandible:</b> fixed appliance + medial symphysis distraction osteogenesis with hybrid distractor <b>Total treatment time:</b> 2Y and 2M <b>Retainer:</b> Hawley's removable <b>Control:</b> 1Y and 6 M, minimal skeletal relapse post-distraction	Distraction osteogenesis has shown to be minimally invasive, comfortable, predictable, and affordable.
Yun S. et al, 2007 [19]	"Scissors-bite correction on second molar with a dragon helix appliance"	♀ 16Y SB- left side (27/37) <b>Other associated problems:</b> Convex profile	SB- dental Bilateral Class II Skeletal Class I	<b>Maxilla:</b> 1 mini-screw (MS) between 25 and 26 connected through stainless steel wire to 26B + dragon helix spring (1 arm 27O, 1 arm 26B) <b>Mandible:</b> 1MS between 35 and 36 connected to 36B + bracket per lingual of 37 with elastic bands <b>SB Correction:</b> 10M	A spring dragon helix combined with indirect skeletal anchorage was used to successfully treat a SB.
Nojima K. et al, 2010 [2]	"A case report of Bilateral Brodie Bite in Early Mixed Dentition Using Bonded Constriction Quad-helix Appliance"	♂ 9Y and 2M SB- bilateral posterior <b>Other associated problems:</b> Convex profile and mandibular retrognathism	SB-skeletal (maxilla and mandible) Bilateral molar Class II Skeletal Class II	<b>Maxilla:</b> quad-helix appliance (constriction) with resin on O-face of 16,55,54,64,65,26 <b>Mandible:</b> bi-helix appliance on 36 and 46 (expansion) <b>Total treatment time:</b> 2Y and 6M <b>SB Correction:</b> 5M	Treatment of bilateral SB in the mixed dentition with a quad helix appliance provided an effective reduction in maxillary width, providing good results in a short period of time and without patient's cooperation

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Pinho T.,2011 [1]	"Early treatment of scissor bite"	<b>Case 1:</b> ♂ 6Y SB- right side (54,55,16/84,85,46) Hypodivergent	<b>Case 1:</b> SB- Dental, compressed mandible Right molar Class III Left molar Class I	<b>Case 1: <u>Mandible:</u></b> cemented expansion appliance with bite plate <b><u>Retainer:</u></b> same expander for 1 month <b><u>SB correction:</u></b> 4M <b><u>Control:</u></b> 6M, no relapse	Mandibular dental expansion appliance with bite plates and intra and inter arch elastics as an effective combination. Anterior bite plate and elastics as an effective combination.
		<b>Case 2:</b> ♂ 8Y SB-right side (54,55,16/84,85,46) Hypodivergent	<b>Case 2: <u>Maxilla:</u></b> crossed elastics between 16 and 55 and mandibular expander + intra-arch elastics between 16 and 26 and 55 and 65 <b><u>Mandible:</u></b> cemented expansion appliance with bite plate + resin on 46 O and B <b><u>SB Correction:</u></b> 8M <b><u>Control:</u></b> 1Y, no relapses	<b>Case 2:</b> ♂ 8Y SB-right side (54,55,16/84,85,46) Hypodivergent	
		<b>Case 3:</b> ♂ 12Y SB- left side (26/36) Hypodivergent	<b>Case 3: <u>Maxilla:</u></b> Cross elastics used between 26 and 36. <b><u>Mandible:</u></b> lingual arch with bite plate except 36. <b><u>SB correction:</u></b> 3M <b><u>Control:</u></b> 3M, no relapse	<b>Case 3:</b> ♂ 12Y SB- left side (26/36) Hypodivergent	
		<b>Case 4:</b> ♀ 11Y SB- right side (14,15/44,45) Hypodivergent	<b>Case 4: <u>Maxilla:</u></b> bite-tubes in palatal of 11 and 21 + crossed elastic between 14 and 44 <b><u>Mandible:</u></b> resin per occlusal and buccal of 44 <b><u>Total treatment time:</u></b> 8M <b><u>Retainer:</u></b> bite tubes until eruption of the second molars	<b>Case 4:</b> ♀ 11Y SB- right side (14,15/44,45) Hypodivergent	
Hua X. et al, 2012 [14]	"Correction of a dental arch-width and asymmetric discrepancy with a slow maxillary contraction appliance"	♂ 12Y and 3M SB- right side (14,15,16/44,45,46) <b>Other associated problems:</b> Convex profile and facial asymmetry	SB- skeletal (maxilla) Bilateral Molar Class III Bilateral Canine Class I Skeletal Class I	<b><u>Maxilla:</u></b> slow maxillary contraction removable appliance <b><u>Total treatment time:</u></b> 17M <b><u>SB Correction:</u></b> 7M <b><u>Retainer:</u></b> 1- the same appliance without the screw (5 months). 2- Hawley removable for maxilla and mandible <b><u>Control:</u></b> 37M, no relapses	Slow maxillary contraction is an inexpensive and effective way to treat transverse maxillary asymmetry.

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Author and year of publication	Title	Sample	Etiology	Treatment	Conclusion
Chandorikar H. et al, 2017 [15]	"Early correction of unilateral scissor bite using transforce appliance and modified twin block appliance"	♂ 9Y SB- right side (54,55,16/84,85, 46) <b>Other associated problems:</b> Straight profile, functional deviation to the left side	SB-dental Left molar Class I Bilateral canine Class III Skeletal Class I	<b>Maxilla:</b> anterior bite plate <b>Mandible:</b> 28 mm lingual transforce appliance, size 2 <b>Total treatment time:</b> 3Y and 6M <b>SB Correction:</b> 5M <b>Retainer:</b> lower lingual retainer + wraparound to the maxilla <b>Control:</b> 2Y, no relapse	This early treatment approach can give predictable results with less patient dependence and discomfort.
Lee K. et al, 2020 [16]	"Scissor Bite Correction with TADs"	♀ 16Y SB-right side (16.17/46.47) <b>Other associated problems:</b> Convex profile without facial asymmetry.	SB- dental Left and right Class II Skeletal Class I	<b>Maxilla:</b> fixed appliance with 2 MS in the midpalatal area and TPA + occlusal ramp on 26 and 15 <b>Mandible:</b> fixed appliance with 2 MS (1 in B between 45 and 46, 1 by DB of 47) <b>Total treatment time:</b> 2Y and 5M <b>SB Correction:</b> 2Y <b>Retainer:</b> fixed lingual retainers in maxilla and mandible <b>Control:</b> 6M, no relapse	MS can be used to successfully correct the SB.
Agrawal A., 2020 [6]	"Brodie Bite: A Clinical Challenge"	♂ 13Y SB- bilateral posterior <b>Other associated problems:</b> Convex profile	SB-skeletal (mandible) Bilateral Class II Skeletal Class II	<b>Maxilla:</b> preadjusted edgewise appliance (initial phase) + Herbst appliance <b>Mandible:</b> edgewise fixed appliance + Herbst appliance + lingual arch to the second molars <b>Total treatment time:</b> 22M <b>Retainer:</b> permanent lingual adhesives on the mandible and invisible on the upper arch	The Herbst appliance successfully corrected the SB with the advantages of reduced time and not needing the patient's cooperation.

**Legend:** SB- Scissor bite; Y- years; M- months; MS- mini-screw; B- buccal; O- occlusal; TPA- transpalatal arch; DB- distobuccal;

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