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Table S1. The detailed search query used in the literature search

Database	Query	Results
PubMed	(Bupivacaine[tiab]) AND (random*[tiab]) AND (molar[tiab])	45
Scopus	TITLE-ABS-KEY (bupivacaine) AND TITLE-ABS-KEY (random*) AND TITLE-ABS-KEY(molar)	69
Web of Science	TS=(bupivacaine AND random* AND molar)	46
CENTRAL	(bupivacaine):ti,ab AND (random*):ti,ab AND (molar):ti,ab	98
Google Scholar	bupivacaine random molar	200
Total	-	458
After duplicate removal	-	323

Table S2. Reported concentrations of bupivacaine and articaine, and epinephrine ratios, across included randomized controlled trials.

Author (YOP)	Articaine	Bupivacaine
Abdulwahab (2009) [16]	4% articaine with 1:200,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine
Aggarwal (2017) [9]	4% articaine with 1:100,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine
Ahmed (2021) [20]	4% articaine with 1:100,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine
Gregorio (2008) [17]	articaine 4 % with 1:200,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine
Kaur (2024) [18]	4% articaine with 1:200,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine
Olmedo-Gaya (2018) [10]	4% articaine with 1:100,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine
Pellicer-Chover (2013) [19]	articaine at 4% (epinephrine 1:100,000	bupivacaine at 0.5% (epinephrine 1:200,000)
Sancho-Puchades (2012) [11]	articaine 4 % with 1:200,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine
Tenglikar (2022) [21]	4% articaine with 1:100,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine

Tokuc (2021) [7]	4% articaine with 1:200,000 epinephrine	0.5% bupivacaine without epinephrine
Trullenque-Eriksson (2011) [22]	articaine 4 % with 1:200,000 epinephrine	0.5% bupivacaine with 1:200,000 epinephrine

YOP: year of publication.