

Supplementary Table 1. Comprehensive Summary Table of Clinical Studies on LSTR

Study (Author & Year)	LSTR Material Used	Comparison Group(s)	No. of Teeth per Group	Follow-up Period	Clinical Success (%)	Radiographic Success (%)	Treatment Method
Takushige et al. (2004)	3Mix-MP	None (Single group)	LSTR: 87	Mean functional time: 22 months	~80% (overall success)	Not specified separately	Non-instrumentation.
Prabhakar et al. 2008	3Mix-MP	LSTR (3Mix-MP) with extirpation	Both groups:30	12 Months	Non-instrumentation: 96.7 Extirpation: 100	Non-instrumentation: 76.7 Extirpation: 100	Non-instrumentation/ Extirpation.
Nakornchai et al. (2010)	3Mix-MP	Pulpectomy: Vitapex	LSTR: 25, Pulpectomy: 25	12 Months	LSTR: 96, Pulpectomy: 96	LSTR: 76, Pulpectomy: 56	Non-instrumentation.
Agarwal et al. (2011)	3Mix-MP	Zinc oxide eugenol (ZOE) Pulpectomy, LSTR (Pulpotec)	LSTR: 20, ZOE: 20, Pulpotec: 20	12 Months	LSTR: 33.33, ZOE: 78.57, Pulpotec: 94.73	Not mentioned	Non-instrumentation/ Full instrumentation.
Pinky et al. (2011)	3Mix-P	LSTR (3Mix-P with Ornidazole)	3Mix-P: 20, Ornidazole: 20	12 Months	3Mix-P: 90 Ornidazole:100	3Mix-P: 90 Ornidazole:100	Non-instrumentation.
Trairatvorakul & Detsomboonrat (2012)	3Mix-MP	None (Single group)	LSTR: 80	24-27 Months	82.7	36.7	Non-instrumentation.
Jaya et al. (2012)	3Mix-MP	3Mix-MP with Tinidazole	Both groups: 15	24 Months	3Mix-MP: 38 Tinidazole:50	3Mix-MP: 31 Tinidazole:43	LSTR: Extirpated
Nanda et al. (2014)	3Mix-P	3Mix-P with Ornidazole	3Mix-P: 20 Ornidazole: 20	12 Months	Both groups: 100	3Mix-P: 81 Ornidazole:92	Non-instrumentation.
Doneria et al. (2017)	Modified 3Mix-MP (Ornidazole, Ciprofloxacin, Cefaclor)	Vitapex, Zinc Oxide-Ozonated Oil (ZnO-Ozone)	Modified 3Mix-MP: 24, Vitapex: 20, ZnO-Ozone: 20	18 Months	Modified 3Mix-MP: 89.5, Vitapex: 100 ZnO-Ozone: 95.5	Modified 3Mix-MP: 80.95, Vitapex: 100 ZnO-Ozone: 94.4	Extirpation.
Dengre et al. (2018)	3Mix-MP	3Mix with: Aloe Vera, Distilled Water	MP: 18 Aloe Vera: 18 Distilled Water: 18	12 Months	MP: 82.35 Aloe Vera: 100 Distilled Water: 81.25	MP: 88.24 Aloe Vera: 100 Distilled Water: 81.25	Non-instrumentation.
Grewal et al. (2018)	3Mix-MP with Cefaclor	Pulpectomy (ZOE)	LSTR: 25, Pulpectomy: 25	36 Months	Success rates were similar	Success rates were similar	LSTR: Extirpated. Pulpectomy: Full instrumentation.
Arangannal et al. (2019)	3Mix-MP with Doxycycline	None	52	12 Months	100	92.5	LSTR: Full instrumentation.
Beniwal et al. (2019)	3Mix-MP	Pulpectomy:ZnO and Ca(OH) ₂	LSTR:25 Pulpectomy:25	6 Months	LSTR:76 Pulpectomy: 100	LSTR:44 Pulpectomy: 76	LSTR: Non-instrumentation. Pulpectomy: Full instrumentation.

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Lokade et al. (2019)	Modified 3Mix-MP (Ornidazole and Cefaclor), Chloramphenicol-Tetracycline-ZOE Paste (CTZ)	Modified 3Mix-MP (Extirpation)	All Groups: 21	12 Months	Modified 3Mix-MP: 90, Modified 3Mix-MP (Extirpation): 90.5 CTZ: 81.8	Modified 3Mix-MP: 75, Modified 3Mix-MP (Extirpation): 76.2 CTZ:63.6	Modified 3Mix-MP, CTZ Paste: Non-instrumentation. Modified 3Mix-MP: Extirpation.
Shankar et al. (2021)	Modified 3Mix (Clindamycin) 1mg/mL vs 1g/mL	None (Two different concentrations)	All Groups 1: 16	3 Months	1mg/mL:84.4 1g/mL:90.6	1mg/mL:78.1 1g/mL:90.6	Non-instrumentation.
Thakur et al. (2021)	3Mixtatin (Statin-enhanced 3Mix), Modified 3Mix-MP	Pulpectomy (Metapex)	3Mixtatin: 30, Modified 3Mix: 29, Pulpectomy: 28	12 Months	3Mixtatin: 90.9, Modified 3Mix: 73.9 Pulpectomy: 52.4	3Mixtatin: 90.9, Modified 3Mix: 60.9 Pulpectomy: 42.9	LSTR: Non-instrumentation. Pulpectomy: Full instrumentation.
Moura et al. (2021)	CTZ	Pulpectomy (ZOE)	LSTR: 44 RCT: 44	12 months	CTZ: 86.4%, ZOE: 90.9%	CTZ: 75.0%, ZOE: 72.7%	LSTR: Non-instrumentation. Pulpectomy: Full instrumentation.
Kharadly et al. (2022)	TAP (Ciprofloxacin, Cefixime, Metronidazole)	Simvastatin	TAP: 11 Simvastatin: 13	12 months	TAP: 81.8 Simvastatin: 92.3	TAP: 63.6 Simvastatin: 76.9	LSTR-Pulpectomy: Full instrumentation.
Zukanović et al. (2023)	3Mix (Amoxicillin, Doxycycline, Metronidazole)	None (Single group)	LSTR: 45	12 Months	95.6	Not specified	Non-instrumentation.
Castro et al. (2023)	LSTR (CTZ)	Pulpectomy (ZOE)	LSTR: 44 Pulpectomy: 44	36 months	LSTR: 86.4 Pulpectomy: 90.9	LSTR and Pulpectomy: 43.2	LSTR: Non-instrumentation. Pulpectomy: Full instrumentation.
Dimri et al. (2024)	Different irrigants (Propolis, NaOCl, CHX, Saline) with 3-Mix	None	LSTR:40 (10 per group)	18 months	100	35	Non-instrumentation.
Sefa et al. (2024)	3Mix-MP	Pulpectomy (Metapex)	LSTR: 71 Pulpectomy:71	12 months	Both: 100	Both:0	LSTR: Non-instrumentation. Pulpectomy: Full instrumentation.

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Culfa & Demir (2025)	3Mix-MP	Alternative 3Mix-MP (with Clindamycin)	3Mix-MP: 29, Alternative 3Mix-MP: 29	12 Months	3Mix-MP: 89.3, Alternative 3Mix-MP: 90.9	3Mix-MP: 78.6, Alternative 3Mix-MP: 68.2	Non-instrumentation.
Jin Sun et al. (2025)	Bioceramic	Pulpectomy (Vitapex)	LSTR: 44 Pulpectomy: 44	12 Months	LSTR-bioceramic: 73.81 Pulpectomy:81.4	LSTR-bioceramic: 59.52 Pulpectomy: 62.79	LSTR: Non-instrumentation. Pulpectomy: Full instrumentation.