Tabl	• 1. Ctudy abora	tariation avtracted	from DubMad databa		1 and regenerat	ion og gograf tarma				
N	Authors (year, country)	Study design	Source of TDM	Tooth part	Mand regenerat Matrix form	Matrix size	Demineralization protocol	Sterilization	Preservation	Outcome
1	Liu et al. (2021, China) [ <b>17</b> ]	<i>In-vitro/ in-vivo</i> animal study	Human teeth	Undefine d	Particles	Undefined	17 mol/L EDTA for 10 min, 10 mol/L for 5 min, and 5 mol/L for 10 min	Co-60 irradiation	Stored at −80 °C	Odontogenic differentiation
2	Li et al. (2021, China) [ <mark>18</mark> ]	In-vitro/ in-vivo animal study	-Human premolars -Porcine deciduous incisors	Root dentin	Root- shaped matrix	10 mm length and 1.0 mm thickness	-17% EDTA for 5 min, 10% for 5 min, and 5% for 10 min -17% EDTA for 20 min, 10% for 18 min, and 5% for 15 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Bio-root regeneration
3	Zhang et al (2021, China) [ <mark>19</mark> ]	<i>In-vitro/ in-vivo</i> animal study	-Human premolars -Rat molars	Root dentin	-Particles (liquid extract) -Sheet scaffold	Undefined	Gradient concentrations of EDTA	Ethylene oxide	Freeze-dried	Bio-root regeneration
4	Fu et al. (2021, China) [ <mark>20</mark> ]	<i>In-vitro/ in-vivo</i> animal study	Beagles premolars	Root dentin	Root- shaped matrix to simulate dental pulp cavity	Undefined	17% EDTA for 12 min, 10% for 12 min, and 5% for 20 min	PBS supplemented with antibiotics for 24 h in 37°C	α-MEM at 4 °C	Dental pulp regeneration
5	Holiel. et al. (2021, Egypt) [ <mark>21</mark> ]	<i>In-vivo</i> human study	Human teeth	Perforate d root dentin	Hydrogel	350-500-µm particle-sized powder dispersed in the sodium alginate solution	17% EDTA for 10 min, 10% for 10 min, and 5% for 5 min	PBS supplemented with antibiotics for 72 h	Single syringe	Direct pulp capping
6	Zhang et al. (2020, China) [ <mark>22</mark> ]	<i>In-vitro/ in-vivo</i> animal study	Human premolars and molars	Root dentin	Liquid extract of hTDM particles	Undefined	17% EDTA for 5 min, 10% for 5 min, and 5% for 10 min	PBS supplemented with antibiotics for 72 h	Undefined	Dental pulp tissue regeneration
7	Chang et al. (2020, Taiwan) [ <b>23</b> ]	<i>In-vitro/ In-vivo</i> animal study	-Human premolars -Goat incisors	Root dentin	Autoclaved sheet scaffold	2 mm × 6 mm × 6 mm dentin matrices	-17% EDTA for 5 min, and 5% EDTA for 5 min	Steam sterilization at 121 °C and 1 bar for 15 min	Undefined	Tooth regeneration
8	Meng et al. (2020, China) [ <mark>24</mark> ]	In-vitro/ In-vivo animal study	Human teeth	Root dentin	Disc-shaped	Disc with 5 mm thickness	10% EDTA for 3 days, and then successively soaked in 17% EDTA for 20 min, 10% EDTA for 20 min, and 5% EDTA for 20 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Bio-root regeneration
9	Bakhtiar et al. (2020,Iran)	In-vitro/ In-vivo animal study	Bovine posterior teeth	Root dentin	Atelopeptidi zed particles	250- to 500-µm particles	17% EDTA for 1, 7, and 13 days, respectively followed	Frozen	Stored at -20 °C	Dentin-pulp tissue engineering

	[ <b>25</b> ]						by atelopeptidization			
10	Yang et al. (2019, China) [ <mark>26</mark> ]	In-vitro/ In-vivo animal study	Human premolars	Root dentin	Particles	Undefined	17% EDTA for 10 min, 10% for 10 min, and 5% for 10 min	Co <sup>60</sup> radiation sterilization	Stored at -80 °C	Bio-root regeneration
11	Yang et al. (2019, China) [ <b>27</b> ]	<i>In-vitro/ In-vivo</i> animal study	Human premolars	Root dentin	Root- shaped matrix	Undefined	17% EDTA for 12 min, 10% for 12 min, and 5% for 20 min	PBS supplemented with antibiotics for 24 h in 37 °C	α-MEM at 4 °C	Bio-root regeneration
12	Sun et al. (2017, China) [ <mark>28</mark> ]	In-vitro/ In-vivo animal study	Porcine deciduous incisors	Root dentin	Root- shaped matrix	-10 mm in length and 3-5 mm in diameter -2 mm in length and 1 mm in diameter	17% EDTA for 20 min, 10% for 18 min, and 5% for 15 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Osteoclastogenesis and osteoclastic resorption
13	Chen et al. (2017, China) [ <mark>29</mark> ]	<i>In-vitro/ In-vivo</i> animal study	-Human premolars -Porcine deciduous incisors	Root dentin	Paste	20 g of TDM powder with particles size <76 µm mixed with aqueous TDM extract	17% EDTA for 10 min, 10% for 10 min, and 5% for 5 min	Undefined	Undefined	Dentin regeneration
14	Li et al. (2017, China) [ <mark>30</mark> ]	<i>In-vitro/ In-vivo</i> animal study	-Porcine deciduous incisors	Root dentin	Root- shaped matrix	-10 mm in length and 3-5 mm in diameter	17% EDTA for 20 min, 10% for 18 min, and 5% for 15 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Tooth tissue remodeling
15	Bakhtiar et al. (2017, Iran) [ <mark>31</mark> ]	<i>In-vitro/ In-vivo</i> animal study	Dogs premolars	Root dentin	Undefined	2-mm-diameter scaffold	17 % EDTA for 5 min, 10 % for 5 min, and 5 % for 10 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Furcation perforation repair
16	Wang et al. (2016, China) [ <mark>32</mark> ]	<i>In-vivo</i> animal study	Human premolars	Root dentin	Root- shaped matrix	1.0 cm length and up to 1.0 mm thickness	17 % EDTA for 5 min, 10 % for 5 min, and 5 % for 10 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Periodontal tissue regeneration.
17	Tian et al. (2015, China) [33]	<i>In-vitro/ In-vivo</i> animal study	Human premolars	Root dentin	Undefined	Undefined	17 % EDTA for 5 min, 10 % for 5 min, and 5 % for 10 min	PBS supplemented with antibiotics for 72 h	DMEM at 4 °C	Dentin tissue regeneration
18	Luo et al. (2015, China) [ <mark>34</mark> ]	<i>In-vivo</i> animal study	Mini-swine Incisors	Root dentin	Tapered shape	The upper diameter 4.9 mm, bottom diameter 3.4 mm; and the length 9.4 mm.	17% EDTA for 20 min, 10% for 20 min, and 5% for 10 min.	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Bio-root regeneration
19	Chen et al. (2015, China) [ <b>35</b> ]	In-vitro/ In-vivo animal study	Human premolars	Root dentin	Root- shaped matrix	Undefined	17 % EDTA for 5 min, 10 % for 5 min, and 5 % for 10 min	PBS supplemented with antibiotics for 72 h	DMEM at 4 °C	Dentin tissue regeneration
20	Chen et al. (2015, China)	In-vitro/ In-vivo animal study	Mini-swine Incisors	Root dentin	Root- shaped	Undefined	17% EDTA for 10 min, 10% for 10 min, and 5% for 5	PBS supplemented with antibiotics for 72	α-MEM at 4 °C	Periodontium and dental pulp

	[ <b>36</b> ]				matrix		min.	h		regeneration
21	Ji et al. (2015, China) [ <mark>37</mark> ]	<i>In-vitro/ In-vivo</i> animal study	Canine premolars	Root dentin	Root- shaped matrix	undefined	17% EDTA for 8 min, 10% for 8 min, and 5% for 12 min	undefined	Undefined	Tooth root regeneration
22	Jiao et al. (2015, China) [ <mark>38</mark> ]	<i>In-vitro/ In-vivo</i> animal study	Human premolars	Root dentin	Root- shaped matrix	length of 1.0 cm and a diameter of 4 mm	17 % EDTA for 5 min, 10 % for 5 min, and 5 % for 10 min	PBS supplemented with antibiotics for 72 h	cryopreserved in liquid nitrogen (−196 °C)	Dentin-pulp tissue regeneration
23	Yang et al. (2014, China) [ <mark>39</mark> ]	<i>In-vitro/ In-vivo</i> animal study	Rat molars	Root dentin	Undefined	Undefined	17% EDTA for 3-4 min, and 5% for 2 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Osteogenic differentiation
24	Guo et al. (2013, China) [ <b>40</b> ]	<i>In-vitro/ In-vivo</i> animal study	Human premolars	Root dentin	Undefined	Undefined	17% EDTA, then in 10% and finally in 5% ( time undefined)	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Odontogenic Differentiation
25	Yang et al. (2012, China) [ <mark>41</mark> ]	<i>In-vitro/ In-vivo</i> animal study	Human premolars	Root dentin	Root- shaped matrix	1.0 cm length and up to 1.0 mm thickness	17 % EDTA for 5 min, 10 % EDTA for 5 min, and 5 % EDTA for 10 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Tooth root regeneration
26	Guo et al. (2012, China) [ <mark>42</mark> ]	<i>In-vivo</i> animal study	Rat molars	Root dentin	Sheet scaffold	2 mm × 6 mm × 6 mm dentin matrices	17% EDTA for 3-4 min, and 5% for 2 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Tooth roots regeneration
27	Li et al. (2011, China) [ <mark>43</mark> ]	<i>In-vitro/ in-vivo</i> animal study	Human premolars	Root dentin	Root- shaped scaffold	Undefined	17 % EDTA for 5 min, 10 % for 5 min, and 5 % for 10 min	PBS supplemented with antibiotics for 72 h	DMEM at 4 °C	Dentin regeneration
28	Guo et al. (2009, China) [ <b>44</b> ]	<i>In-vitro/ in-vivo</i> animal study	Rat molars	Root dentin	Sheet scaffold	2 mm × 6 mm × 6 mm dentin matrices	17% EDTA for 3-4 min, and 5% for 2 min	PBS supplemented with antibiotics for 72 h	α-MEM at 4 °C	Dentin regeneration

Tabl	e 2: Study character	istics extracted f	rom PubMed databa	se using DDM	and regenerat	ion as search terms				
N	Authors (year, country)	Study design	Source of TDM	Tooth part	Matrix form	Matrix size	Demineralization protocol	Sterilization	Preservation	Outcome
1	Kim et al. (2021, Republic of Korea) [ <mark>45</mark> ]	<i>In-vivo</i> animal study	Human teeth	Root dentin	Pulverized particles	1–2 mm pulverized particles	0.6 N HCI	Ethylene oxide gas	Room temperature	Bone regeneration
2	Ku et al. (2021, Republic of Korea) [ <mark>46</mark> ]	Case report	Human molars	Root dentin	Barrier Membrane	300 to 800 µm thick slice of autogenous tooth bone graft block with 0.2 to 0.3 mm diameter holes	0.6 N HCI	Freeze-drying	Packaged	Guided bone regeneration
3	Han et al. (2021, Republic of Korea) [ <mark>47</mark> ]	In-vitro study	Human teeth	Tooth dentin	Particle- Based Bio- Ink	≤100 µm	4 weeks with a 0.5 M EDTA containing protease inhibitors	Gradient ethanol	Undefined	3D dental tissue regeneration
4	Kabir et al. (2021, Japan) [ <mark>48</mark> ]	<i>In-vivo</i> animal study	Human molars	Tooth dentin	Perforated root- deminerali zed dentin matrix	The average length and width were 13.08 and 8.41 mm, respectively	supersonic demineralization in 5 L of 0.34 N HNO <sub>3</sub> solutions at 100 W and 60 kHz for 30 min	Undefined	Undefined	Critical-size Iliac defects' regeneration
5	Jing et al. (2021, China) [ <mark>49</mark> ]	In-vitro/ in- vivo animal study	Human teeth	Tooth dentin	Decorated particles via carboxyme thyl chitosan	100-700 μm in diameter	17 mol L–1 (5 min), 10 mol L-1 (5 min), 5 mol L- 1 (10 min) EDTA	Ethylene oxide gas	stored at 4 °C	Osteogenic differentiation and bone regeneration
6	Gao et al. (2020, China) [ <mark>50</mark> ]	In-vitro study	Human teeth	Tooth dentin	Particles	≤ 300−1000 µm	0.71 M HCl for 12 h at 37 °C in a shaker	Undefined	0.1× PBS at 4 ℃	Osteogenic differentiation
7	Umebayashi et al. (2020, Japan) [ <mark>51</mark> ]	Case report	Human teeth	Tooth dentin	Particles of partially DDM and Particulate Cancellous Bone and Marrow	A diameter of approximately 1 mm	Partially demineralized in 2% HNO3	Undefined	Prepared during the operation for bone augmentation	Full regeneration of maxillary alveolar bone
8	Um et al. (2019, Republic of Korea) [ <mark>52</mark> ]	Case Series	Human teeth	Root dentin	Particles loaded with recombina nt human bone morphogen etic-2	300-800 µm in diameter	Demineralized for 30 min in 0.6 N HCI	Ethylene oxide gas	stored at room temperature	Socket preservation

9	Li et al. (2018, China) [ <mark>53</mark> ]	Prospective clinical study	Human teeth	Tooth dentin	Granules	300 -1200 μm	Demineralized in 2% $HNO_3$ for 20 minutes	5% peracetic acid and 75% ethanol for 10 min	Freshly prepared	Guided bone for immediate implantation regeneration
10	Melling et al. (2018, UK) [ <mark>54</mark> ]	<i>In-vitro</i> study	Human teeth	Tooth dentin	DDM extract- loaded liposomes	Liposomes of ~100 nm ±20 nm	7.5 % EDTA diNa+	Lyophilized	undefined	Dental tissue regeneration
11	Minamizatoet al. (2018, Japan) [ <mark>55</mark> ]	Prospective clinical study	Vital and non-vital human teeth	Tooth dentin	Particles	400 μm to 800 μm	2% HNO <sub>3</sub> (pH 1.0) for 10 min	Rinsed extensively twice in 0.1 M Tris– HCI (pH 7.4) for 10 min	Freshly prepared	Bone regeneration procedures related to implant dentistry, including socket preservation, alveolar ridge augmentation, and maxillary sinus floor augmentation
12	Kabir et al. (2017, Japan) [ <mark>56</mark> ]	<i>In-vivo</i> animal study	Human vital non- functional wisdom teeth	Tooth dentin	Perforated root- deminerali zed dentin matrix	Thirty pores of 1mm hole, as the pore size	Supersonic demineralization in 0.34N HNO <sub>3</sub> solution at 100W and 60kHz for 30min	Undefined	Undefined	Bone regeneration in critical-size sheep iliac defects
13	Pang et al. (2017, Republic of Korea) [ <mark>57</mark> ]	prospective randomized clinical trial	Human teeth	Tooth dentin	Particles	300 and 800 µm	0.6 N HCI	Ethylene oxide gas	Room temperature	Alveolar bone defect
14	Nam et al. (2016, Republic of Korea) [58]	<i>In-vivo</i> animal study	Human teeth	Tooth dentin	Particles	0.25 to 1.0 mm in size or 1.0 to 2.0 mm in size	Demineralized for 15 h in hydrochloric acid	Ethylene oxide gas	Packaged	Cranial bone regeneration
15	Kim et al. (2016, Republic of Korea) [ <mark>59</mark> ]	<i>In-vivo</i> animal study	Human teeth	Tooth dentin	Particles	1~2-mm-sized crushed particles	Undefined	Ethylene oxide gas	Packaged	Bone-forming capacity
16	Kim et al. (2016, Republic of Korea) [60]	Case report	Human teeth	Tooth dentin	Particles	0.5 to1.0 mm	Undefined	Ethylene oxide gas	Packaged	Guided Bone Regeneration
17	Gomes et al. (2016, Brazil) [ <mark>61</mark> ]	<i>In-vivo</i> animal study	Central incisors of the normoglycaemic rabbits	Tooth dentin	Slices	8 µm in thickness	0.6 N-HCl solution at 2°C until complete demineralization	Slices were immersed in a box filled with 5 mL alcohol/0.2 mL of gentamicin	Stored at 2°C until implantation	Bone tissue engineering in cranioplasty of diabetic rabbits
18	Koga et al. (2016, Japan) [ <mark>62</mark> ]	In-vitro/ in- vivo animal study	Vital or non-vital human teeth	Tooth dentin	Particles	180 μm/ 1200 μm	2% HNO <sub>3</sub> , partially/ completely demineralized dentin matrix	Rinsed twice in 0.1 M Tris-HCI (pH 7.4), for 10 minutes.	Undefined	Bone Regeneration
19	Liu et al. (2016, China) [ <mark>63</mark> ]	In-vitro/ in- vivo animal study	Human teeth	Tooth dentin	Extract	1 mg/ 10 mg/ml	Undefined	Undefined	Freshly prepared	Odontoblastic Differentiation of Dental Pulp Stem

										Cells
20	Qin et al. (2015, China) [ <mark>64</mark> ]	<i>In-vitro/ in- vivo</i> animal study	Human teeth	Crown dentin	Semi-rigid barrier	Slices of cubic appearance with 2 × 2 × 8 mm	0.6 M HCl solution	Undefined	Undefined	Guiding periodontal tissue regeneration
21	Bakhshalian et al. (2013, USA) [ <mark>65</mark> ]	In-vivo animal study	Rabbit mandibular incisor	Tooth dentin	Particles	300 µm	0.6 M HCl for 1 week/ tooth	The teeth were mixed in a sterile container	Room temperature	Osteopromotive Property
22	Li et al. (2013, China) [ <mark>66</mark> ]	<i>In-vitro/ in- vivo</i> animal study	Human teeth	Tooth dentin	Granules	10–140 meshes	Undefined	irradiated with Cobalt 60 at a radiation dose of 5 kGy	Undefined	Bone tissue regeneration
23	Zhang et al. 2012, China) [ <b>67</b> ]	<i>In-vitro/ in- vivo</i> animal study	Incisors of twenty 8-week-old SD rats	Tooth dentin	Granules	200– 280 µm	17% EDTA, pH 8.0 at 4C for 10 min	Ethylene oxide gas	Undefined	Dentinogenic Potential of Dental Pulp Stem Cells
24	Yagihashi et al. (2009, Japan) [ <mark>68</mark> ]	<i>In-vivo</i> animal study	ovine lower anterior teeth	Tooth dentin	Particles	250- to 500-µm	0.6 N HCl for 1 week/ tooth	Ethylene oxide gas	Undefined	Repair of articular cartilage defects
25	Gomes et al. (2008, Brazil) [ <mark>69</mark> ]	<i>In-vivo</i> animal study	Central incisors of the normoglycaemic rabbits	Tooth dentin	Slices	8 µm in thickness	0.6 N-HCl solution at 2°C until complete demineralization	Slices were immersed in a box filled with 5 mL alcohol/0.2 mL of gentamicin	Stored at 2°C until implantation	Bone repair
26	Gomes et al. (2002, Brazil) [ <b>70</b> ]	<i>In-vivo</i> animal study	Central incisors of the normoglycaemic rabbits	Tooth dentin	Slices	8 µm in thickness	0.6 N-HCl solution at 2°C until complete demineralization	Slices were immersed in a box filled with 5 mL alcohol/0.2 mL of gentamicin	Stored at 2°C until implantation	Bone repair
27	Gomes et al. (2001, Brazil) [ <mark>71</mark> ]	<i>In-vivo</i> animal study	Central incisors of the normoglycaemic rabbits	Tooth dentin	Slices	8 µm in thickness	0.6 N-HCl solution at 2°C until complete demineralization	Slices were immersed in a box filled with 5 mL alcohol/0.2 mL of gentamicin	Stored at 2°C until implantation	Bone repair

Tat	able 3: Study characteristics extracted from Medline (OVID) database using TDM and regeneration as search terms.												
Ν	Authors (year, country)	Study design	Source of TDM	Tooth part	Matrix form	Matrix size	Demineralization protocol	Sterilization	Preservation	Outcome			
1	Xu et al. (2021, China [ <b>72</b> ]	<i>In-vitrol in-vivo</i> animal study	Mandibular and maxillary premolars	Root dentin	Root segment	10 mm-long segments, and the root canal was enlarged to 5 mm in diameter of both ends	17%, 10%, and 5% EDTA, respectively, for 30 minutes	Soaked into penicillin- streptomycin	4°C over 3 days	Dental Pulp Regeneration			
2	Elfana et al. (2021, Egypt) [ <b>73</b> ]	A randomized controlled clinical trial	Non-molar human teeth	Tooth dentin	Particles	Undefined	0.6 N HCl for 30 min	Undefined	Undefined	Alveolar ridge preservation			
3	Wen et al. (2021, China) [ <mark>74</mark> ]	<i>In-vitro/ in-vivo</i> animal study	-Healthy human third molars -Porcine incisors	Tooth dentin	Particles to get aqueous extracts	≤ 40 µm	17%, 10%, and 5% EDTA, respectively, for 30 minutes	Sterilized by radiation of Co60	α-MEM culture medium for 7 days	Reparative dentin formation			
4	Mehrvarzfar et al. (2018, Iran) [ <b>75</b> ]	Clinical trial	Intact human third molars	Crown dentin	Dentin chips	1 mm thickness	17% EDTA for 5 min, 10% EDTA for 5 min and 5% EDTA for 10 min	Rinsed with sterile saline for 10 min	stored in PBS until required	Partial pulpotomy			

Tak	able 4: Study characteristics extracted from Medline (OVID) database using DDM and regeneration as search terms.											
Ν	Authors (year, country)	Study design	Source of TDM	Tooth part	Matrix form	Matrix size	Demineralization protocol	Sterilization	Preservation	Outcome		
1	Ouyyamwongs et al. (2019,Thailand) [ <mark>76</mark> ]	A Split-Mouth Randomized Controlled Clinical Trial	Intact human third molars	Tooth dentin	Particles	500-700 μm	Undefined	Sterilized with ethylene oxide gas	Undefined	Alveolar Ridge Preservation		
2	Xu et al. (2018, Republic of Korea) [ <b>77</b> ]	<i>In-vivo</i> animal study	Human permanent teeth	Tooth dentin	Particles	0.8 to 1.0 mm	0.6N HCI for 15 min	Sterilized with sterilization reagent	Undefined	Maxillary sinus augmentation		
3	Feng et al. (2018, China) [ <mark>78</mark> ]	<i>In-vitro/ in-vivo</i> animal study	Intact human third molars	Root dentin	Porous sheet	100 μm thickness	0.6 M HCI for 2 weeks	Dipped in PBS and placed at 4°C overnight	Put in a sterile EP tube at-20°C until use	Periodontal ligament-like tissue regeneration		
4	Al-Asfour et al. (2017, Sweden) [ <mark>79</mark> ]	<i>In-vivo</i> animal study	Human premolars	Root dentin	Cylindrical dentin block	5 mm in diameter and 2 mm thickness	24%EDTA neutral, pH7, for 12 h	Undefined	Undefined	Onlay grafts to rabbit tibia		
5	Park et al. (2015, Republic of Korea) [ <mark>80</mark> ]	<i>In-vivo</i> animal study	Exfoliated deciduous teeth	Crown dentin	Particles	800 -1000 μm in size	0.6N HCl was done for 0, 10, 15, 20, 25, 30, 60and 90 min respectively for <i>in</i> <i>vitro</i> analysis, and for 15 min for <i>in vivo</i> experiment	Sterilized with peracetic acid- ethanol solution	Prepared sample was kept in the refrigerator at 4°C	Bone healing		
6	Park et al. (2015, Republic of Korea) [ <mark>81</mark> ]	<i>In-vitro/ in-vivo</i> animal study	Extracted human permanent teeth	Tooth dentin	Dentin blocks	5 mm in diameter, 2 mm in height	0.6N HCl for 10 and 60 min each	Sterilized with peracetic acid- ethanol solution	Prepared sample was kept in the refrigerator at 4°C	Bone formation		
7	de Oliveira et al. (2013, Brazil) [ <mark>82</mark> ]	<i>In-vivo</i> animal study	Human permanent teeth	Root dentin	Slice	Undefined	10%EDTA, pH 7.2 at room temperature for approximately 3 months	Washed in sterilized deionized water for 10 min	Stored in sterile PBS containing 100 units/ml penicillin and 100 mg/ml streptomycin	Bone formation during healing process of tooth sockets		
8	Mordenfeld et al. (2011, Sweden) [ <b>83</b> ]	<i>In-vivo</i> animal study	Unerupted developing pig teeth	Tooth dentin	Dentin block	2–3mm thick and 4 mm in diameter	24% EDTA (pH 7.0) for 1, 2, 6 or 12 h, respectively, in room temperature	Undefined	Stored for one to 2months in a freezer at -18°C before implantation	Tissue reactions to subperiosteal onlays		
9	Koike et al. (2005, Japan) [ <mark>84</mark> ]	<i>In-vivo</i> animal study	Rat incisors	Root dentin	Dentin tubes	8 mm in length	0.6 N HCl at room temperature for 3 h	Undefined	Undefined	Ectopic bone formation		