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Knowledge and Attitude of Intentional Replantation among Dental Students

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Original Article

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ABSTRACT

Purposeful replantation (IR) is a surgical approach conforming of a tooth's controlled birth. The ultimate is dislocated in its original alveolar socket after being endodontically treated extra-orally. The present work was conducted to assess the purposeful replantation by reviewing the literature of papers. Papers streamlined from June 2024 to July 2024, have been included. Each reviewed composition was estimated using a ten-question data birth form to identify the type of study, the coitus and age of the cases, the teeth treated, the extra-alveolar time of the teeth, the ways used, and the time of follow up. Ultramodern technologies recently introduced in dentistry backed in achieving encouraging results; Particularly, it has been stressed that surgical interventions are shorter and lower invasive and with a lower chance of failure. Finally, this work aimed to dissect and bandy the surgical procedures of IR described in the literature by different authors through a review of the literature. Likewise, a clinical case using the purposeful preimplantation fashion was also reported.

Keywords: Endodontic Microsurgery, Intentional Replantation, Periapical Pathosis, Tooth Replantation.

Introduction

The primary purpose of endodontic treatment is to cure pulpal and periapical pathosis.[1] For dental healthcare interpreters, especially endodontic experts, a seditious apical order-radicular lesion in a formerly saturated tooth that persists or progresses is a serious concern. According to different studies[2,3] the frequency of this post-treatment endodontic complaint varies from 16 to 65.

The presence of microorganisms throughout the root conduit system and/ or in the apical region has been suggested as the major reason for pupal and periapical pathos is, while other factors similar as the presence of excrescences, cystic factors similar as cholesterol chargers, and patient

seditious conditioning were also seen to be associated.[2] Nonsurgical pretreatment or surgical operation is always the primary line of treatment.[3]

Purposeful replantation can be defined as the purposeful birth of a tooth from its socket, followed by evaluation of the root shells, apicoectomy, retrograde medication and restoration, Andre-insertion of the tooth into its native socket.[4] Purposeful replantation is supported as an indispensable way of treating post-endodontic pathology or failed nonsurgical pretreatment. It is also useful in cases where the surgical approach to the point is delicate, and there is a need to avoid damaging the ingrain anatomical structures or to ameliorate functional efficacy.[5]

Ways of purposeful replantation grounded on ultramodern endodontic surgical principles and the understanding of post-replantation complications have continuously evolved and critically advanced.[6] Still, despite the bettered issues grounded on ultramodern endodontic surgical principles, the knowledge and use of purposeful replantation as a treatment option in diurnal practice aren't wide, conceivably because of a deficit of extant literature and a lack of understanding regarding its different way and practices observed in different countries. To the stylish of our knowledge, there have been no checks on purposeful replantation on a transnational scale. Hence, the end and purpose of this study were to probe the knowledge, station, and practices (MAP) of purposeful replantation as a treatment modality among endodontists and postgraduate scholars of endodontics in India.

Materials and Methods

This cross-sectional research was conducted between June 2024 and July 2024, involving undergraduate and postgraduate students specializing in endodontics from a tertiary care teaching hospital. The final sample totaled 250 individuals.

Initially, a set of 11 questions was created, of which 22 questions were refined based on content validation by one national and one international expert in endodontics. The questionnaire was designed using Google Forms (Google Inc., Mountain View, California).

The participants in the study were asked about various factors, including case selection, methods of extraction, antibiotic treatments, mediums for root hydration, preparations for retrograde procedures, materials used for retrograde restoration, preferences of the operators, indicators for prognosis, and the level of acceptance by patients. To ensure reliability, the participants were randomly selected to complete the survey again after a span of 15 days.

Inclusion Criteria

3rd year, 4th year undergraduate dental students, Post graduate dental students.

Exclusion Criteria

1st year, 2nd year, undergraduate dental students and Staff.

Statistical Analysis

Q1

Gender				Q1				Total
				1	2	3	4	
1	Year of study	1	Count	4	7	1	4	16
			% of Total	5.2%	9.1%	1.3%	5.2%	20.8%
		2	Count	0	11	5	4	20
			% of Total	0.0%	14.3%	6.5%	5.2%	26.0%
		3	Count	0	4	3	10	17
			% of Total	0.0%	5.2%	3.9%	13.0%	22.1%
		4	Count	0	1	0	5	6
			% of Total	0.0%	1.3%	0.0%	6.5%	7.8%

		5	Count	0	0	6	7	13
			% of Total	0.0%	0.0%	7.8%	9.1%	16.9%
		6	Count	3	2	0	0	5
			% of Total	3.9%	2.6%	0.0%	0.0%	6.5%
	Total		Count	7	25	15	30	77
			% of Total	9.1%	32.5%	19.5%	39.0%	100.0%
2	Year of study	1	Count	6	7	5	28	46
			% of Total	3.5%	4.1%	2.9%	16.3%	26.7%
		2	Count	3	16	12	14	45
			% of Total	1.7%	9.3%	7.0%	8.1%	26.2%
		3	Count	6	9	11	25	51
			% of Total	3.5%	5.2%	6.4%	14.5%	29.7%
		4	Count	0	2	0	8	10
			% of Total	0.0%	1.2%	0.0%	4.7%	5.8%
		5	Count	2	5	3	3	13
			% of Total	1.2%	2.9%	1.7%	1.7%	7.6%
		6	Count	1	0	1	5	7
			% of Total	0.6%	0.0%	0.6%	2.9%	4.1%
	Total		Count	18	39	32	83	172
			% of Total	10.5%	22.7%	18.6%	48.3%	100.0%
Total	Year of study	1	Count	10	14	6	32	62
			% of Total	4.0%	5.6%	2.4%	12.9%	24.9%
		2	Count	3	27	17	18	65
			% of Total	1.2%	10.8%	6.8%	7.2%	26.1%
		3	Count	6	13	14	35	68
			% of Total	2.4%	5.2%	5.6%	14.1%	27.3%
		4	Count	0	3	0	13	16
			% of Total	0.0%	1.2%	0.0%	5.2%	6.4%
		5	Count	2	5	9	10	26
			% of Total	0.8%	2.0%	3.6%	4.0%	10.4%
		6	Count	4	2	1	5	12
			% of Total	1.6%	0.8%	0.4%	2.0%	4.8%
	Total		Count	25	64	47	113	249
			% of Total	10.0%	25.7%	18.9%	45.4%	100.0%

P-value = 0.000*

Q2

Gender				Q2				Total
				1	2	3	4	
1	year of study	1	Count	1	5	8	2	16
			% of Total	1.3%	6.5%	10.4%	2.6%	20.8%
		2	Count	4	10	6	0	20
			% of Total	5.2%	13.0%	7.8%	0.0%	26.0%
		3	Count	4	10	1	2	17
			% of Total	5.2%	13.0%	1.3%	2.6%	22.1%
		4	Count	3	1	2	0	6
			% of Total	3.9%	1.3%	2.6%	0.0%	7.8%
		5	Count	1	8	2	2	13
			% of Total	1.3%	10.4%	2.6%	2.6%	16.9%

		6	Count	2	2	1	0	5
			% of Total	2.6%	2.6%	1.3%	0.0%	6.5%
	Total		Count	15	36	20	6	77
			% of Total	19.5%	46.8%	26.0%	7.8%	100.0%
2	Year of study	1	Count	7	18	12	9	46
			% of Total	4.1%	10.5%	7.0%	5.2%	26.7%
		2	Count	5	25	11	4	45
			% of Total	2.9%	14.5%	6.4%	2.3%	26.2%
		3	Count	18	18	8	7	51
			% of Total	10.5%	10.5%	4.7%	4.1%	29.7%
		4	Count	5	3	2	0	10
			% of Total	2.9%	1.7%	1.2%	0.0%	5.8%
		5	Count	2	4	6	1	13
			% of Total	1.2%	2.3%	3.5%	0.6%	7.6%
		6	Count	3	2	0	2	7
			% of Total	1.7%	1.2%	0.0%	1.2%	4.1%
	Total		Count	40	70	39	23	172
			% of Total	23.3%	40.7%	22.7%	13.4%	100.0%
Total	year of study	1	Count	8	23	20	11	62
			% of Total	3.2%	9.2%	8.0%	4.4%	24.9%
		2	Count	9	35	17	4	65
			% of Total	3.6%	14.1%	6.8%	1.6%	26.1%
		3	Count	22	28	9	9	68
			% of Total	8.8%	11.2%	3.6%	3.6%	27.3%
		4	Count	8	4	4	0	16
			% of Total	3.2%	1.6%	1.6%	0.0%	6.4%
		5	Count	3	12	8	3	26
			% of Total	1.2%	4.8%	3.2%	1.2%	10.4%
		6	Count	5	4	1	2	12
			% of Total	2.0%	1.6%	0.4%	0.8%	4.8%
	Total		Count	55	106	59	29	249
			% of Total	22.1%	42.6%	23.7%	11.6%	100.0%

P-value = 0.004*

Q3

Gender				Q3				Total
				1	2	3	4	
1	Year of study	1	Count	7	0	7	2	16
			% of Total	9.1%	0.0%	9.1%	2.6%	20.8%
		2	Count	4	9	6	1	20
			% of Total	5.2%	11.7%	7.8%	1.3%	26.0%
		3	Count	3	12	2	0	17
			% of Total	3.9%	15.6%	2.6%	0.0%	22.1%
		4	Count	3	2	1	0	6
			% of Total	3.9%	2.6%	1.3%	0.0%	7.8%
		5	Count	0	7	6	0	13
			% of Total	0.0%	9.1%	7.8%	0.0%	16.9%
		6	Count	3	1	1	0	5
			% of Total	3.9%	1.3%	1.3%	0.0%	6.5%

	Total		Count	20	31	23	3	77
			% of Total	26.0%	40.3%	29.9%	3.9%	100.0%
2	Year of study	1	Count	11	21	8	6	46
			% of Total	6.4%	12.2%	4.7%	3.5%	26.7%
		2	Count	6	23	14	2	45
			% of Total	3.5%	13.4%	8.1%	1.2%	26.2%
		3	Count	7	29	11	4	51
			% of Total	4.1%	16.9%	6.4%	2.3%	29.7%
		4	Count	2	5	2	1	10
			% of Total	1.2%	2.9%	1.2%	0.6%	5.8%
		5	Count	1	4	8	0	13
			% of Total	0.6%	2.3%	4.7%	0.0%	7.6%
		6	Count	0	4	1	2	7
			% of Total	0.0%	2.3%	0.6%	1.2%	4.1%
	Total		Count	27	86	44	15	172
			% of Total	15.7%	50.0%	25.6%	8.7%	100.0%
Total	year of study	1	Count	18	21	15	8	62
			% of Total	7.2%	8.4%	6.0%	3.2%	24.9%
		2	Count	10	32	20	3	65
			% of Total	4.0%	12.9%	8.0%	1.2%	26.1%
		3	Count	10	41	13	4	68
			% of Total	4.0%	16.5%	5.2%	1.6%	27.3%
		4	Count	5	7	3	1	16
			% of Total	2.0%	2.8%	1.2%	0.4%	6.4%
		5	Count	1	11	14	0	26
			% of Total	0.4%	4.4%	5.6%	0.0%	10.4%
		6	Count	3	5	2	2	12
			% of Total	1.2%	2.0%	0.8%	0.8%	4.8%
	Total		Count	47	117	67	18	249
			% of Total	18.9%	47.0%	26.9%	7.2%	100.0%

P-value = 0.007*

Q4

Gender				Q4				Total
				1	2	3	4	
1	Year of study		Count	3	4	6	3	16
			% of Total	3.9%	5.2%	7.8%	3.9%	20.8%
		2	Count	6	7	7	0	20
			% of Total	7.8%	9.1%	9.1%	0.0%	26.0%
		3	Count	3	11	3	0	17
			% of Total	3.9%	14.3%	3.9%	0.0%	22.1%
		4	Count	1	2	0	3	6
			% of Total	1.3%	2.6%	0.0%	3.9%	7.8%
		5	Count	2	6	5	0	13
			% of Total	2.6%	7.8%	6.5%	0.0%	16.9%
		6	Count	1	3	1	0	5
			% of Total	1.3%	3.9%	1.3%	0.0%	6.5%
	Total		Count	16	33	22	6	77
			% of Total	20.8%	42.9%	28.6%	7.8%	100.0%

2	Year of study	1	Count	8	21	10	7	46
			% of Total	4.7%	12.2%	5.8%	4.1%	26.7%
		2	Count	3	31	9	2	45
			% of Total	1.7%	18.0%	5.2%	1.2%	26.2%
		3	Count	9	25	12	5	51
			% of Total	5.2%	14.5%	7.0%	2.9%	29.7%
		4	Count	0	7	2	1	10
			% of Total	0.0%	4.1%	1.2%	0.6%	5.8%
		5	Count	2	7	1	3	13
			% of Total	1.2%	4.1%	0.6%	1.7%	7.6%
		6	Count	0	4	3	0	7
			% of Total	0.0%	2.3%	1.7%	0.0%	4.1%
	Total		Count	22	95	37	18	172
			% of Total	12.8%	55.2%	21.5%	10.5%	100.0%
Total	Year of study	1	Count	11	25	16	10	62
			% of Total	4.4%	10.0%	6.4%	4.0%	24.9%
		2	Count	9	38	16	2	65
			% of Total	3.6%	15.3%	6.4%	0.8%	26.1%
		3	Count	12	36	15	5	68
			% of Total	4.8%	14.5%	6.0%	2.0%	27.3%
		4	Count	1	9	2	4	16
			% of Total	0.4%	3.6%	0.8%	1.6%	6.4%
		5	Count	4	13	6	3	26
			% of Total	1.6%	5.2%	2.4%	1.2%	10.4%
		6	Count	1	7	4	0	12
			% of Total	0.4%	2.8%	1.6%	0.0%	4.8%
	Total		Count	38	128	59	24	249
			% of Total	15.3%	51.4%	23.7%	9.6%	100.0%

P-value = 0.328

Q5

Gender				Q5				Total
				1	2	3	4	
1	Year of study	1	Count	6	6	4	0	16
			% of Total	7.8%	7.8%	5.2%	0.0%	20.8%
		2	Count	1	11	7	1	20
			% of Total	1.3%	14.3%	9.1%	1.3%	26.0%
		3	Count	3	10	4	0	17
			% of Total	3.9%	13.0%	5.2%	0.0%	22.1%
		4	Count	0	4	1	1	6
			% of Total	0.0%	5.2%	1.3%	1.3%	7.8%
		5	Count	1	6	4	2	13
			% of Total	1.3%	7.8%	5.2%	2.6%	16.9%
		6	Count	1	4	0	0	5
			% of Total	1.3%	5.2%	0.0%	0.0%	6.5%
	Total		Count	12	41	20	4	77
			% of Total	15.6%	53.2%	26.0%	5.2%	100.0%
2	Year of study	1	Count	10	22	9	5	46
			% of Total	5.8%	12.8%	5.2%	2.9%	26.7%

		2	Count	5	27	10	3	45
			% of Total	2.9%	15.7%	5.8%	1.7%	26.2%
		3	Count	13	21	11	6	51
			% of Total	7.6%	12.2%	6.4%	3.5%	29.7%
		4	Count	0	5	1	4	10
			% of Total	0.0%	2.9%	0.6%	2.3%	5.8%
		5	Count	2	3	8	0	13
			% of Total	1.2%	1.7%	4.7%	0.0%	7.6%
		6	Count	0	4	2	1	7
			% of Total	0.0%	2.3%	1.2%	0.6%	4.1%
	Total		Count	30	82	41	19	172
			% of Total	17.4%	47.7%	23.8%	11.0%	100.0%
Total	year of study	1	Count	16	28	13	5	62
			% of Total	6.4%	11.2%	5.2%	2.0%	24.9%
		2	Count	6	38	17	4	65
			% of Total	2.4%	15.3%	6.8%	1.6%	26.1%
		3	Count	16	31	15	6	68
			% of Total	6.4%	12.4%	6.0%	2.4%	27.3%
		4	Count	0	9	2	5	16
			% of Total	0.0%	3.6%	0.8%	2.0%	6.4%
		5	Count	3	9	12	2	26
			% of Total	1.2%	3.6%	4.8%	0.8%	10.4%
		6	Count	1	8	2	1	12
			% of Total	0.4%	3.2%	0.8%	0.4%	4.8%
	Total		Count	42	123	61	23	249
			% of Total	16.9%	49.4%	24.5%	9.2%	100.0%

P-value = 0.011*

Q6

Gender				Q6					Total
				1	2	3	4	5	
1	Year of study	1	Count	5	6	2	2	1	16
			% of Total	6.5%	7.8%	2.6%	2.6%	1.3%	20.8%
		2	Count	3	8	9	0	0	20
			% of Total	3.9%	10.4%	11.7%	0.0%	0.0%	26.0%
		3	Count	7	7	2	1	0	17
			% of Total	9.1%	9.1%	2.6%	1.3%	0.0%	22.1%
		4	Count	2	2	2	0	0	6
			% of Total	2.6%	2.6%	2.6%	0.0%	0.0%	7.8%
		5	Count	2	9	1	1	0	13
			% of Total	2.6%	11.7%	1.3%	1.3%	0.0%	16.9%
		6	Count	1	2	2	0	0	5
			% of Total	1.3%	2.6%	2.6%	0.0%	0.0%	6.5%
	Total		Count	20	34	18	4	1	77
			% of Total	26.0%	44.2%	23.4%	5.2%	1.3%	100.0%
2	Year of study	1	Count	6	11	20	9		46
			% of Total	3.5%	6.4%	11.6%	5.2%		26.7%
		2	Count	13	28	1	3		45
			% of Total	7.6%	16.3%	0.6%	1.7%		26.2%

		3	Count	18	20	11	2		51
			% of Total	10.5%	11.6%	6.4%	1.2%		29.7%
		4	Count	0	7	1	2		10
			% of Total	0.0%	4.1%	0.6%	1.2%		5.8%
		5	Count	1	7	4	1		13
			% of Total	0.6%	4.1%	2.3%	0.6%		7.6%
		6	Count	3	2	2	0		7
			% of Total	1.7%	1.2%	1.2%	0.0%		4.1%
	Total		Count	41	75	39	17		172
			% of Total	23.8%	43.6%	22.7%	9.9%		100.0%
Total	Year of study	1	Count	11	17	22	11	1	62
			% of Total	4.4%	6.8%	8.8%	4.4%	0.4%	24.9%
		2	Count	16	36	10	3	0	65
			% of Total	6.4%	14.5%	4.0%	1.2%	0.0%	26.1%
		3	Count	25	27	13	3	0	68
			% of Total	10.0%	10.8%	5.2%	1.2%	0.0%	27.3%
		4	Count	2	9	3	2	0	16
			% of Total	0.8%	3.6%	1.2%	0.8%	0.0%	6.4%
		5	Count	3	16	5	2	0	26
			% of Total	1.2%	6.4%	2.0%	0.8%	0.0%	10.4%
		6	Count	4	4	4	0	0	12
			% of Total	1.6%	1.6%	1.6%	0.0%	0.0%	4.8%
	Total		Count	61	109	57	21	1	249
			% of Total	24.5%	43.8%	22.9%	8.4%	0.4%	100.0%

P-value = 0.010*

Q7

Gender				Q7				Total
				1	2	3	4	
1	Year of study	1	Count	5	8	2	1	16
			% of Total	6.5%	10.4%	2.6%	1.3%	20.8%
		2	Count	5	10	4	1	20
			% of Total	6.5%	13.0%	5.2%	1.3%	26.0%
		3	Count	3	6	6	2	17
			% of Total	3.9%	7.8%	7.8%	2.6%	22.1%
		4	Count	2	3	1	0	6
			% of Total	2.6%	3.9%	1.3%	0.0%	7.8%
		5	Count	1	9	2	1	13
			% of Total	1.3%	11.7%	2.6%	1.3%	16.9%
		6	Count	1	3	0	1	5
			% of Total	1.3%	3.9%	0.0%	1.3%	6.5%
	Total		Count	17	39	15	6	77
			% of Total	22.1%	50.6%	19.5%	7.8%	100.0%
2	Year of study	1	Count	11	18	11	6	46
			% of Total	6.4%	10.5%	6.4%	3.5%	26.7%
		2	Count	13	18	13	1	45
			% of Total	7.6%	10.5%	7.6%	0.6%	26.2%
		3	Count	15	16	15	5	51
			% of Total	8.7%	9.3%	8.7%	2.9%	29.7%

		4	Count	2	3	3	2	10
			% of Total	1.2%	1.7%	1.7%	1.2%	5.8%
		5	Count	2	8	1	2	13
			% of Total	1.2%	4.7%	0.6%	1.2%	7.6%
		6	Count	1	4	2	0	7
			% of Total	0.6%	2.3%	1.2%	0.0%	4.1%
	Total		Count	44	67	45	16	172
			% of Total	25.6%	39.0%	26.2%	9.3%	100.0%
Total	Year of study	1	Count	16	26	13	7	62
			% of Total	6.4%	10.4%	5.2%	2.8%	24.9%
		2	Count	18	28	17	2	65
			% of Total	7.2%	11.2%	6.8%	0.8%	26.1%
		3	Count	18	22	21	7	68
			% of Total	7.2%	8.8%	8.4%	2.8%	27.3%
		4	Count	4	6	4	2	16
			% of Total	1.6%	2.4%	1.6%	0.8%	6.4%
		5	Count	3	17	3	3	26
			% of Total	1.2%	6.8%	1.2%	1.2%	10.4%
		6	Count	2	7	2	1	12
			% of Total	0.8%	2.8%	0.8%	0.4%	4.8%
	Total		Count	61	106	60	22	249
			% of Total	24.5%	42.6%	24.1%	8.8%	100.0%

P-value = 0.430*

Q8

Gender				Q8				Total
				1	2	3	4	
1	Year of study	1	Count	5	9	2	0	16
			% of Total	6.5%	11.7%	2.6%	0.0%	20.8%
		2	Count	0	5	14	1	20
			% of Total	0.0%	6.5%	18.2%	1.3%	26.0%
		3	Count	4	6	5	2	17
			% of Total	5.2%	7.8%	6.5%	2.6%	22.1%
		4	Count	4	1	1	0	6
			% of Total	5.2%	1.3%	1.3%	0.0%	7.8%
		5	Count	4	1	5	3	13
			% of Total	5.2%	1.3%	6.5%	3.9%	16.9%
		6	Count	1	0	2	2	5
			% of Total	1.3%	0.0%	2.6%	2.6%	6.5%
	Total		Count	18	22	29	8	77
			% of Total	23.4%	28.6%	37.7%	10.4%	100.0%
2	Year of study	1	Count	20	10	11	5	46
			% of Total	11.6%	5.8%	6.4%	2.9%	26.7%
		2	Count	7	12	23	3	45
			% of Total	4.1%	7.0%	13.4%	1.7%	26.2%
		3	Count	11	15	19	6	51
			% of Total	6.4%	8.7%	11.0%	3.5%	29.7%
		4	Count	1	1	6	2	10
			% of Total	0.6%	0.6%	3.5%	1.2%	5.8%

		5	Count	0	2	9	2	13
			% of Total	0.0%	1.2%	5.2%	1.2%	7.6%
		6	Count	4	1	1	1	7
			% of Total	2.3%	0.6%	0.6%	0.6%	4.1%
	Total		Count	43	41	69	19	172
			% of Total	25.0%	23.8%	40.1%	11.0%	100.0%
Total	Year of study	1	Count	25	19	13	5	62
			% of Total	10.0%	7.6%	5.2%	2.0%	24.9%
		2	Count	7	17	37	4	65
			% of Total	2.8%	6.8%	14.9%	1.6%	26.1%
		3	Count	15	21	24	8	68
			% of Total	6.0%	8.4%	9.6%	3.2%	27.3%
		4	Count	5	2	7	2	16
			% of Total	2.0%	0.8%	2.8%	0.8%	6.4%
		5	Count	4	3	14	5	26
			% of Total	1.6%	1.2%	5.6%	2.0%	10.4%
		6	Count	5	1	3	3	12
			% of Total	2.0%	0.4%	1.2%	1.2%	4.8%
	Total		Count	61	63	98	27	249
			% of Total	24.5%	25.3%	39.4%	10.8%	100.0%

P-value = 0.001*

Q9

Gender				Q9				Total
				1	2	3	4	
1	Year of study	1	Count	7	5	3	1	16
			% of Total	9.1%	6.5%	3.9%	1.3%	20.8%
		2	Count	1	9	9	1	20
			% of Total	1.3%	11.7%	11.7%	1.3%	26.0%
		3	Count	5	9	3	0	17
			% of Total	6.5%	11.7%	3.9%	0.0%	22.1%
		4	Count	4	1	1	0	6
			% of Total	5.2%	1.3%	1.3%	0.0%	7.8%
		5	Count	1	10	0	2	13
			% of Total	1.3%	13.0%	0.0%	2.6%	16.9%
		6	Count	2	1	1	1	5
			% of Total	2.6%	1.3%	1.3%	1.3%	6.5%
	Total		Count	20	35	17	5	77
			% of Total	26.0%	45.5%	22.1%	6.5%	100.0%
2	Year of study	1	Count	15	19	11	1	46
			% of Total	8.7%	11.0%	6.4%	0.6%	26.7%
		2	Count	14	19	11	1	45
			% of Total	8.1%	11.0%	6.4%	0.6%	26.2%
		3	Count	18	20	7	6	51
			% of Total	10.5%	11.6%	4.1%	3.5%	29.7%
		4	Count	2	3	5	0	10
			% of Total	1.2%	1.7%	2.9%	0.0%	5.8%
		5	Count	2	4	7	0	13
			% of Total	1.2%	2.3%	4.1%	0.0%	7.6%

		6	Count	4	2	0	1	7
			% of Total	2.3%	1.2%	0.0%	0.6%	4.1%
	Total		Count	55	67	41	9	172
			% of Total	32.0%	39.0%	23.8%	5.2%	100.0%
Total	Year of study	1	Count	22	24	14	2	62
			% of Total	8.8%	9.6%	5.6%	0.8%	24.9%
		2	Count	15	28	20	2	65
			% of Total	6.0%	11.2%	8.0%	0.8%	26.1%
		3	Count	23	29	10	6	68
			% of Total	9.2%	11.6%	4.0%	2.4%	27.3%
		4	Count	6	4	6	0	16
			% of Total	2.4%	1.6%	2.4%	0.0%	6.4%
		5	Count	3	14	7	2	26
			% of Total	1.2%	5.6%	2.8%	0.8%	10.4%
		6	Count	6	3	1	2	12
			% of Total	2.4%	1.2%	0.4%	0.8%	4.8%
	Total		Count	75	102	58	14	249
			% of Total	30.1%	41.0%	23.3%	5.6%	100.0%

P-value = 0.094*

Q10

Gender				Q10				Total
				1	2	3	4	
1	Year of study	1	Count	5	6	5	0	16
			% of Total	6.5%	7.8%	6.5%	0.0%	20.8%
		2	Count	3	6	9	2	20
			% of Total	3.9%	7.8%	11.7%	2.6%	26.0%
		3	Count	3	9	3	2	17
			% of Total	3.9%	11.7%	3.9%	2.6%	22.1%
		4	Count	0	5	1	0	6
			% of Total	0.0%	6.5%	1.3%	0.0%	7.8%
		5	Count	2	7	4	0	13
			% of Total	2.6%	9.1%	5.2%	0.0%	16.9%
		6	Count	0	1	2	2	5
			% of Total	0.0%	1.3%	2.6%	2.6%	6.5%
	Total		Count	13	34	24	6	77
			% of Total	16.9%	44.2%	31.2%	7.8%	100.0%
2	Year of study	1	Count	4	18	20	4	46
			% of Total	2.3%	10.5%	11.6%	2.3%	26.7%
		2	Count	11	20	11	3	45
			% of Total	6.4%	11.6%	6.4%	1.7%	26.2%
		3	Count	7	22	16	6	51
			% of Total	4.1%	12.8%	9.3%	3.5%	29.7%
		4	Count	0	7	3	0	10
			% of Total	0.0%	4.1%	1.7%	0.0%	5.8%
		5	Count	3	6	1	3	13
			% of Total	1.7%	3.5%	0.6%	1.7%	7.6%
		6	Count	0	3	3	1	7
			% of Total	0.0%	1.7%	1.7%	0.6%	4.1%

	Total		Count	25	76	54	17	172
			% of Total	14.5%	44.2%	31.4%	9.9%	100.0%
Total	Year of study	1	Count	9	24	25	4	62
			% of Total	3.6%	9.6%	10.0%	1.6%	24.9%
		2	Count	14	26	20	5	65
			% of Total	5.6%	10.4%	8.0%	2.0%	26.1%
		3	Count	10	31	19	8	68
			% of Total	4.0%	12.4%	7.6%	3.2%	27.3%
		4	Count	0	12	4	0	16
			% of Total	0.0%	4.8%	1.6%	0.0%	6.4%
		5	Count	5	13	5	3	26
			% of Total	2.0%	5.2%	2.0%	1.2%	10.4%
		6	Count	0	4	5	3	12
			% of Total	0.0%	1.6%	2.0%	1.2%	4.8%
	Total		Count	38	110	78	23	249
			% of Total	15.3%	44.2%	31.3%	9.2%	100.0%

P-value = 0.149*

Q11

Gender				Q11				Total
				1	2	3	4	
1	Year of study	1	Count	2	9	1	4	16
			% of Total	2.6%	11.7%	1.3%	5.2%	20.8%
		2	Count	1	7	11	1	20
			% of Total	1.3%	9.1%	14.3%	1.3%	26.0%
		3	Count	4	5	8	0	17
			% of Total	5.2%	6.5%	10.4%	0.0%	22.1%
		4	Count	5	1	0	0	6
			% of Total	6.5%	1.3%	0.0%	0.0%	7.8%
		5	Count	1	7	4	1	13
			% of Total	1.3%	9.1%	5.2%	1.3%	16.9%
		6	Count	0	2	3	0	5
			% of Total	0.0%	2.6%	3.9%	0.0%	6.5%
	Total		Count	13	31	27	6	77
			% of Total	16.9%	40.3%	35.1%	7.8%	100.0%
2	Year of study	1	Count	11	12	12	11	46
			% of Total	6.4%	7.0%	7.0%	6.4%	26.7%
		2	Count	5	20	17	3	45
			% of Total	2.9%	11.6%	9.9%	1.7%	26.2%
		3	Count	9	18	17	7	51
			% of Total	5.2%	10.5%	9.9%	4.1%	29.7%
		4	Count	0	5	5	0	10
			% of Total	0.0%	2.9%	2.9%	0.0%	5.8%
		5	Count	1	3	4	5	13
			% of Total	0.6%	1.7%	2.3%	2.9%	7.6%

		6	Count	2	3	2	0	7
			% of Total	1.2%	1.7%	1.2%	0.0%	4.1%
	Total		Count	28	61	57	26	172
			% of Total	16.3%	35.5%	33.1%	15.1%	100.0%
Total	Year of study	1	Count	13	21	13	15	62
			% of Total	5.2%	8.4%	5.2%	6.0%	24.9%
		2	Count	6	27	28	4	65
			% of Total	2.4%	10.8%	11.2%	1.6%	26.1%
		3	Count	13	23	25	7	68
			% of Total	5.2%	9.2%	10.0%	2.8%	27.3%
		4	Count	5	6	5	0	16
			% of Total	2.0%	2.4%	2.0%	0.0%	6.4%
		5	Count	2	10	8	6	26
			% of Total	0.8%	4.0%	3.2%	2.4%	10.4%
		6	Count	2	5	5	0	12
			% of Total	0.8%	2.0%	2.0%	0.0%	4.8%
	Total		Count	41	92	84	32	249
			% of Total	16.5%	36.9%	33.7%	12.9%	100.0%

P-value = 0.029*

Q12

Gender				Q12				Total
				1	2	3	4	
1	Year of study	1	Count	7	8	1	0	16
			% of Total	9.1%	10.4%	1.3%	0.0%	20.8%
		2	Count	3	7	9	1	20
			% of Total	3.9%	9.1%	11.7%	1.3%	26.0%
		3	Count	6	5	5	1	17
			% of Total	7.8%	6.5%	6.5%	1.3%	22.1%
		4	Count	3	2	1	0	6
			% of Total	3.9%	2.6%	1.3%	0.0%	7.8%
		5	Count	2	8	1	2	13
			% of Total	2.6%	10.4%	1.3%	2.6%	16.9%
		6	Count	3	1	0	1	5
			% of Total	3.9%	1.3%	0.0%	1.3%	6.5%
	Total		Count	24	31	17	5	77
			% of Total	31.2%	40.3%	22.1%	6.5%	100.0%
2	year of study	1	Count	20	9	9	8	46
			% of Total	11.6%	5.2%	5.2%	4.7%	26.7%
		2	Count	11	24	9	1	45
			% of Total	6.4%	14.0%	5.2%	0.6%	26.2%
		3	Count	12	26	9	4	51
			% of Total	7.0%	15.1%	5.2%	2.3%	29.7%

		4	Count	1	4	2	3	10
			% of Total	0.6%	2.3%	1.2%	1.7%	5.8%
		5	Count	4	5	2	2	13
			% of Total	2.3%	2.9%	1.2%	1.2%	7.6%
		6	Count	2	3	1	1	7
			% of Total	1.2%	1.7%	0.6%	0.6%	4.1%
	Total		Count	50	71	32	19	172
			% of Total	29.1%	41.3%	18.6%	11.0%	100.0%
Total	Year of study	1	Count	27	17	10	8	62
			% of Total	10.8%	6.8%	4.0%	3.2%	24.9%
		2	Count	14	31	18	2	65
			% of Total	5.6%	12.4%	7.2%	0.8%	26.1%
		3	Count	18	31	14	5	68
			% of Total	7.2%	12.4%	5.6%	2.0%	27.3%
		4	Count	4	6	3	3	16
			% of Total	1.6%	2.4%	1.2%	1.2%	6.4%
		5	Count	6	13	3	4	26
			% of Total	2.4%	5.2%	1.2%	1.6%	10.4%
		6	Count	5	4	1	2	12
			% of Total	2.0%	1.6%	0.4%	0.8%	4.8%
	Total		Count	74	102	49	24	249
			% of Total	29.7%	41.0%	19.7%	9.6%	100.0%

P-value = 0.097*

Results

The questionnaire was circulated to 250 actors. The trustability of the repliers, calculated using kappa scores, was 0.987. In this study, the Chi-squared test yielded a largely statistically significant (p-value<0.05) association between the country and variables on the questionnaire. Regarding the 22 questions of the check, statistically significant differences were set up between the groups and the region of practice.

Regarding the question on actors' stations toward purposeful replantation, 72.7 considered it as another treatment modality, while 27.3 considered it as a last resort. The actors were apprehensive of the case selection, absolute suggestions, and contraindications of the treatment modality. Also, 86.4 of the actors considered purposeful replantation to be more provident than tooth relief by single-tooth implants. Only 24.6 of the actors were knowledgeable about the survival rate of the designed seeded teeth. Most of the respondents were correct about the judicious operation of antibiotics, and 77.3 of the population preferred two drivers to perform the treatment.

Pre-operative disinfection of the surgical point was recommended by 92.6 of the actors. Forceps were set up to be preferred for birth by 58.5 of the actors. When asked about the critical step, utmost of the repliers named preservation of the socket, periodontal ligament, and alveolar bone. Hanks' Balanced swab result (HBSS) was set up to be the most favored root hydration medium for the storehouse of the tooth after birth. An aggregate of 76.5 of the repliers preferred that the tooth be seeded into the socket in lower than 15 twinkles. Also, 78.1 of the repliers preferred tore-insert the tooth with digital placement and digital contraction of the socket walls.

Utmost of the actors preferred ultrasonics for retrograde medication, and Biodentine (

Septodont, Saint- Maur- des- Fossés, France) was the most constantly used material to fill root ends, followed by mineral trioxide (MTA).

When asked about the purposeful replantation of periodontal-involved teeth, 68.2 of the actors considered it as an absolute contraindication. Regarding the definitive prognostic index for bettered clinical issues and survival rate, 59 of the repliers preferred teeth with lower extra-oral time Andre-operative orthodontic extrusion, while 36.1 chose a lower quantum of extra-oral time as the only prognostic index.

Of the aggregate, 45.4 of the repliers had performed a purposeful replantation, out of which only 58.3 had a follow-up of three to five times. When asked about the case acceptance position toward the treatment modality, 47.1 of the reporters said it was relatively respectable, 29.9 said it was inadequately respectable, 17 said it was readily respectable, and 6 said they weren't sure about it.

Discussion

The primary thing of this study was to probe the MAP of purposeful replantation among undergraduate and postgraduate scholars in India and to ground the gaps that live in the way and the protocol of the treatment modality that is observed across different countries.

The actors were apprehensive of the case selection, absolute suggestions, and contraindications of purposeful replantation. Still, there was a lack of knowledge among dentists regarding the purposeful replantation of periodontal-involved teeth. According to Cho et al.[7], purposeful replantation isn't always contraindicated by periodontal involvement. Also, as per a former study[7], individuals under the age of 40 and those that had teeth with one or two preoperative periodontal pockets less than 6 mm had, independently, 2.6 and 2.5 times lower probability of failure than aged individuals and those that had teeth with advanced periodontal pockets.

In this study, purposeful replantation was set up to be more provident than tooth relief by implant procedures. The actors were well apprehensive of the antibiotic content and preoperative disinfection of the surgical point. Utmost of them preferred two drivers to perform the treatment. Still, the actors were uninformed of the survival rate of designed seeded teeth. According to Mainkar et al.[1], the survival rate is 89.1 and may indeed increase when teeth are seeded grounded in ultramodern endodontic surgical principles. Regarding atraumatic birth, the maturity of the Indian reps preferred forceps.

When actors were asked about whether they had performed a case of purposeful replantation, about 45.4 said they had. Among those, only 58.3 had a follow-up of three to five times. Purposeful replantation can be a suitable option for the operation of inapproachable cervical resorption and perpendicular root fractures.

Due to geographical differences in how English is spoken and understood around the world and the fact that this questionnaire was created to cover the transnational dental population, there is a minor chance that the dentists who responded to it might have unintentionally educated questionnaire bias. To avoid this form of bias, during the initiation of the airman study itself, the questions were validated and made as fair and straightforward as possible.

Conclusion

When nonsurgical and surgical pretreatments are considered to be infeasible, purposeful replantation emerges as a promising treatment option for conserving the natural dentition. In the present study, responses were gathered on a transnational scale, and the high knowledge scores are encouraging, particularly for specialty dentists. It can be concluded that a vast number of endodontists and postgraduate scholars across

different countries view purposeful replantation as a peripheral treatment modality rather than a last resort. Also, it proves to be the most cost-effective option compared to single-tooth reserves, with high survival rates and better issues.

References

1. A systematic review of the survival of teeth intentionally replanted with a modern technique and cost-effectiveness compared with single-tooth implants. Mainkar A. J Endod. 2017;43:1963–1968. doi: https://doi.org/10.1016/j.joen.2017.08.019
2. Reasons for persistent and emerging post-treatment endodontic disease. Haapasalo M, Shen YA, Ricucci D. Endod Topics. 2008;18:31–50. doi: https://doi.org/10.1111/j.1601-1546.2011.00256.x
3. Aetiology of root canal treatment failure: why well-treated teeth can fail. Siqueira JF Jr. Int Endod J. 2001;34:1–10. doi: https://doi.org/10.1046/j.1365-2591.2001.00396.x
4. Intentional replantation of teeth. Grossman LI. J Am Dent Assoc. 1966;72:1111–1118. doi: https://doi.org/10.14219/jada.archive.1966.0125
5. Considerations and concepts of case selection in the management of post-treatment endodontic disease (treatment failure) Friedman S. Endodontic Topics. 2002;1:54–78. https://doi.org/10.1034/j.1601-1546.2002.10105.x
6. Intentional replantation techniques: A critical review. Becker BD. J Endod. 2018;44:14–21. doi: https://doi.org/10.1016/j.joen.2017.08.002
7. Clinical outcomes after intentional replantation of periodontally involved teeth. Cho SY, Lee SJ, Kim E. J Endod. 2017;43:550–555. doi: https://doi.org/10.1016/j.joen.2016.11.024

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