

PRACTICAL CLINICAL COURSES
A Service of the Gordon J. Christensen
Career Development Program

V1331
Nonsurgical Retreatment:
Disassembly & Missed Canals, Quality & Profitability

Produced by
ADVANCED ENDODONTICS
Clifford J. Ruddle, DDS (Founder/Director)

Materials Included:
C.E. Instruction Sheet
Product/Supplier Lists
Clinician Responsible
Goals & Objectives
Overview
Supplemental Materials
AGD Post-Test

Gordon J. Christensen
PRACTICAL CLINICAL COURSES

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Clifford J. Ruddle
ADVANCED ENDODONTICS
Sources of Products Discussed in
V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability
Presented by: Clifford J. Ruddle, DDS

ITEM	DESCRIPTION	BRAND / COMPANY
Edge-Ease	X-ray Comfort Cushions	Strong Dental / Schein
Rubber Dam	Handidam (one size)	Aseptico / Dentsply Tulsa Dental
Rubber Dam Frame	Ostby Type - Part no. 547-3539	Hygenic / Schein
Rubber Dam Clamps	Molars (26, 8A), Anteriors (9), Bi's (9)	Ivory or Hu-Friedly / Schein
Hot Pulp Test Tip	For thermal testing	SybronEndo or Schein
Mirror Handle w/Ruler	Item #100-8125	Schein
Stropko Irrigator	Tri-plex syringe adapter	Dr. John Stropko
Metalift	Crown & Bridge Remover	Classic Practice Resources
Endo Access Kit	Assorted Burs & X-Gates	Dentsply Tulsa Dental
Burs...Transmetal	1958 or 2158 FG	Brasseler
...Round Surgical Length	FG 2, 4 Carbide	Brasseler
...Tapered Diamonds	Round End (6856L-014) / Needle (859-010)	Brasseler
IRRIGANTS / DEVICES:		
Irrigating Syringes	3cc, 23 gauge (notched tip)	Monoject / Schein
Navi-Tip	29 gauge (notched tip), 21 mm	Ultradent
NaOCl Warmer	Sm. hotplate for warm water bath	Mr. Coffee
Water Beaker	2651A (3x3) -- For NaOCl syringes	Profex Medical Products
RC Prep or Glyde	Viscous chelator	Schein
Syringe for RC Prep / Glyde	1cc Plastic #0124	Ultradent
Tip for syringe / Stropko Irrigator	White Mac #0661	Ultradent
17% EDTA	Aqueous chelator	Roth International
Calcium Hydroxide	Interappointment dressing	Pulpdent / Schein
Xylol/Chloroform	Clean excess sealer off walls / Remove cements	Schein
HAND INSTRUMENTATION:		
Files / 10, 15	K-Files	Dentsply Maillefer
Files / 20, 25, 30	Flexofiles	Dentsply Maillefer
Files / 35, 40, 50, 60	SureFlex	Dentsply Maillefer
ProTaper Hand Files	Snap-on handles (SX, S1, S2, F1, F2, F3)	Dentsply Tulsa Dental
Bird Beak Plier	For precurving NiTi hand files	Hu-Friedly / Schein
Endo Ring	Blue Ring w/Foam Inserts	Jordco / Schein
Micro Openers & Debriders	All Sizes	Dentsply Maillefer
ROTARY INSTRUMENTATION:		
ProTaper Rotary Files	SX, S1, S2, F1, F2, F3, F4, F5	Dentsply Tulsa Dental
ProTaper Retreatment Files	D1, D2, D3	Dentsply Tulsa Dental
ProFile Orifice Shapers	Sizes 20-50	Dentsply Tulsa Dental
ProFile .04 Tapers	Sizes 35-50	Dentsply Tulsa Dental
X-Gates	Single Instrument (Gates Gliddens 1-4)	Dentsply Tulsa Dental
Gates Glidden Drills	Stainless Steel Sizes 1-6	Dentsply Maillefer

(Continued)

ITEM	DESCRIPTION	BRAND / COMPANY
CROWN & BRIDGE REMOVAL:		
Crown Splitter	Removing restorative segments	SybronEndo
K.Y. Pliers	Grasping Instrument	G.C. America / Schein
Wynman Crown Gripper	Grasping Instrument	Miltex Instrument / Schein
Crown-a-matic	Percussive Instrument	Peerless / Schein
Coronaflex	Percussive Instrument	KaVo America
Metallift	Passive/Active Instrument	Classic Practice Resources
Kline Crown Remover	Passive/Active Instrument	Brasseler
Richwil	Accessory Device	Almore / Schein
Rand	Accessory Device	J.R.Rand / Schein
CANAL OBSTRUCTIONS:		
Stieglitz Forceps	Silver point removers	Hu-Friedy / Schein
Spinal Tap Needle	18, 20, 22 g., 2 1/2", SS-1529 Blunt	Ranfac
Instrument Removal System (iRS)	Remove silver points, carriers or files	Dentsply Tulsa Dental
Ruddle Post Removal System	Post Remover Kit	SybronEndo
Roto-Pro Burs (Variety of sizes)	Rotosonic Scalers for Post Removal	Ellman
Gyro-Tip	For Fiber Post Removal	Ultradent
PASTE REMOVAL:		
Endosolv E	Eugenate Based Paste	Endoco
Endosolv R	Resin Based Paste	Endoco
PERFORATION REPAIRS:		
ProRoot (MTA)	Mineral Trioxide Aggregate	Dentsply Tulsa Dental
SuperEba	Resin cement	Harry J. Bosworth / Schein
Calcium Sulfate	Medical Grade	Life Core Biomedical
CollaCote	Absorbable collagen dressing	Sulzer Dental
West Perf Repair Instruments	West 1-2, West 3-4	SybronEndo
Spinal Tap Needle	18 g. for delivering ProRoot	Ranfac
Dovgan Carriers	ProRoot (MTA) Carrier	Quality Aspirators
ADHESION DENTISTRY:		
Curing Light	Demetron or Pro-Lite	SybronEndo or Maillefer
Focu Tips	For narrowing light beam	SmartPractice
Tubulicid Red	For cleaning enamel & dentin	Global Dental
Etch-37	Etchant 37% Phosphoric Acid	Bisco
Tooth Conditioner Gel	Etching gel in syringe	Caulk / Schein
Microbrush	Etching & bonding	Schein
Benda Brush	Applicator brush	Centrix / Schein
OBTURATION:		
Gutta Percha	Fine-Medium / Medium or ProTaper Matching	Dentsply Tulsa Dental
Pulp Canal Sealer - EWT	Powder & Liquid	Kerr / Schein
5004 Touch 'N Heat	Heat Source 0.5mm plugger tip	Kerr / Schein
Pluggers	Sizes 8-12 Posterior	Schilder / Dentsply Maillefer
Calamus Flow	Gutta Percha Delivery System for backpacking	Dentsply Tulsa Dental
Calcium Hydroxide	Interappointment dressing	Pulpdent Corp / Schein

(Continued)

ITEM	DESCRIPTION	BRAND / COMPANY
EQUIPMENT:		
EndoActivator System	Sonic Handpiece Driver & Activator Tips	Dentsply Tulsa Dental
Slowspeed Electric H.P.	Gear Reduction / DTC Motor	Dentsply Tulsa Dental
Slowspeed Electric or Air	Gear Reduction	KaVo America
Ultrasonic Unit (Piezoelectric)	P5 Ultrasonic Generator	Dentsply Tulsa Dental
Ultrasonic Instruments	ProUltra ENDO 1-5, ENDO 6-8, SINE 1-6	Dentsply Tulsa Dental
File Adapter	FA11 (file holder)	SybronEndo
Electronic Apex Locator	Root ZX	J. Morita
Microscope	A variety of choices	Zeiss
Dental Mobile Cart	Customized Endodontic Cart	ASI Medical
Digital Xray System	Digital Radiography	Schick Technologies
Dental Anatomy Website	Patient Education Tool	ToothAtlas.com

For any questions regarding the products and/or techniques presented, please contact:

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122 S. Patterson Avenue, Ste. 206, Santa Barbara, CA 93111 • (800) 753-3636 • www.endoruddle.com

Clifford J. Ruddle
ADVANCED ENDODONTICS
Sources of Suppliers Discussed in
V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability
Presented by: Clifford J. Ruddle, DDS

COMPANY	TOLL FREE	FAX	PHONE	WEBSITE
Advanced Endodontics	800-753-3636	805-965-8253	805-964-8838	endoruddle.com
Aseptico	800-426-5913	360-668-8722	425-487-3157	aseptico.com
ASI Medical	800-566-9953	303-766-8584	303-766-3646	asimedical.net
Bisco	800-247-3368	800-959-9550	847-534-6000	bisco.com
Brasseler	800-841-4522	888-610-1937	912-927-8671	brasselerusa.com
C. K. Dental Specialties	800-675-2537	714-639-6991	714-639-6990	ckdental.net
CareCredit	800-859-9975	800-333-3196	--	carecredit.com
Classic Practice Resources	800-928-9289	888-841-5384	225-928-0799	metalfit.com
Dentco	800-454-9244	914-948-1711	914-682-6600	dentcorp.com
Dentsply Maillefer	800-924-7393	800-924-7389	--	maillefer.com
Dentsply Tulsa Dental Spec.	800-662-1202	918-493-6599	918-493-6598	tulsadental.com
Designs for Vision	800-727-6407	631-585-3404	631-585-3300	designsforvision.com
Ellman International	800-835-5355	516-569-0054	516-594-3333	ellman.com
Endoco	800-388-7868	866-683-6679	901-683-6677	endoco.com
Global Dental Products	--	516-785-7885	516-221-8844	gdpdental.com
Global Surgical	800-767-8726	636-861-2969	636-861-3388	globalsurgical.com
Hu-Friedy	800-483-7433	800-729-1299	877-321-4333	hu-friedy.com
J. Morita USA	888-566-7482	949-465-1095	949-581-9600	jmoritausa.com
KaVo America	800-323-8029	847-550-6825	847-550-6800	kavo.com
Life Core Biomedical	800-348-4368	952-368-3411	952-368-4300	lifecore.com
Link Ergonomics	800-424-5465	417-206-4622	417-206-4600	linkdental.com
Marquis Dental	800-359-3206	303-344-5232	303-344-5222	perio-aid.net
Moyco Precision Abrasives	800-331-8837	215-362-3809	215-855-4300	moycotech.com
Mr. Coffee	800-672-6333	--	--	mrcoffee.com
Profex Medical Products	800-325-0196	901-454-9850	901-452-7485	profexmed.com
Quality Aspirators	800-858-2121	972-298-6592	972-298-2669	qualityaspirators.com
Ranfac	800-272-6322	508-584-8588	508-588-4400	ranfac.com
Roth International Ltd.	800-445-0572	312-733-7398	312-733-1478	rothendo.com
Henry Schein	800-372-4346	800-732-7023	775-327-3200	henryschein.com
Schick Technologies	877-724-4254	718-482-2030	718-937-5765	schicktech.com
SmartPractice	800-522-0800	800-522-8329	602-225-0595	smartpractice.com
Stropko, Dr. John	--	480-563-7881	480-515-4933	stropko.com
SybronEndo	800-346-3636	714-516-7936	714-516-7979	sybronendo.com
ToothAtlas.com	--	650-854-2568	650-233-0200	eHuman.com
Ultradent	800-552-5512	800-842-9024	801-572-4200	ultradent.com
Zeiss	800-442-4020	925-557-4101	925-557-4100	zeiss.com
Zimmer Dental	800-854-7019	760-431-7811	760-431-9515	zimmerdental.com

PROGRAM

V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability

CLINICIAN RESPONSIBLE:

Clifford J. Ruddle, DDS

Founder and Director, Advanced Endodontics

GOALS & OBJECTIVES

At the completion of this video presentation, participants should be able to accomplish the following:

1. Identify the rationale for nonsurgical endodontic retreatment.
2. Compare survival rates between the restored, retreated tooth and the dental implant.
3. Contrast the various devices for removing fixed restoratives intact.
4. Utilize “microsonic” procedures to remove core materials from the pulp chamber.
5. Locate and successfully treat previously missed canals.
6. Describe appropriate patient communication tools and teamwork.
7. Identify the proper scheduling and fee model for success.

OVERVIEW

V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability

There is a need to communicate well with patients concerning endodontic retreatment. This video shows the instruments and techniques for removing restorative materials, identifying and treating missed canals, and scheduling and fee considerations. A review of root canal system anatomy and its role in endodontic prognosis is followed by a systematic analysis of those factors commonly implicated in endodontic failure. Evidence-based procedures are clearly demonstrated utilizing the most proven, effective, and state-of-the-art techniques. Multi-disciplinary treatment planning, case selection, and retreatment fees are emphasized in order to improve clinical results, professional satisfaction, and profitability. This program is designed for the dental team whose vision is the long-term retention of critically essential teeth.

Techniques in this video are demonstrated utilizing 3D graphics and animations, in plastic models, on extracted teeth, and on patients. All procedures have been performed to optimally transfer knowledge and maximize the learning experience.

SUPPLEMENTAL MATERIALS

V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability

1. Allen RK, Newton CW, Brown CE: A statistical analysis of surgical and non-surgical endodontic retreatment cases, *J Endod* 15:6, 1989.
2. Barkhordar RA, Stewart GG: The potential of periodontal pocket formation associated with untreated accessory root canals, *Oral Surg Oral Med Oral Pathol* 70:6, 1990.
3. Burns RC, Herbranson EJ: Ch. 7, Tooth morphology and cavity preparations. *Pathways of the Pulp*, 7th ed., Mosby Co., St. Louis, 1998.
4. Hess W, Zürcher E: *The Anatomy of the Root Canals of the Teeth of the Permanent and Deciduous Dentitions*, William Wood & Co, New York, 1925.
5. Kois JC: The restorative-periodontal interface: biological parameters, *Periodontology 2000* 11:29-38, 1996.
6. Milot P, Stein RS: Root fracture in endodontically treated teeth related to post selection and crown design, *J Prosthet Dent* 68:428, 1992.
7. Parreira FR, O'Connor RP, Hutter JW: Cast prosthesis removal using ultrasonics and a thermoplastic resin adhesive, *J Endod* 20:3, 1994.
8. Ruddle CJ: How to profit from endo: finding the fair fee for endodontics, *Dental Economics* 88:11, pp. 30-42, 1998.
9. Ruddle CJ: Microdentistry: identification & treatment of MB^{II} systems, *J Calif Dent Assoc* 25:4, 1997.
10. Ruddle CJ: Microendodontic nonsurgical retreatment, in *Microscopes in Endodontics, Dental Clinics of North America* 41:3, pp. 429-454, W.B. Saunders, Philadelphia, July 1997.
11. Schilder H: Filling the root canals in three dimensions, *Dent Clin North Am*, p. 723, November 1967.
12. Schilder H: Ch. 6, Canal debridement and disinfection, *Pathways of the Pulp*, 1st ed., Mosby Co., St. Louis, 1976.
13. Shanelec DA, Tibbetts LS: A perspective on the future of periodontal microsurgery, *Periodontology 2000* 11:58-64, 1996.
14. Sorensen JA, Engelman MJ: Ferrule design and fracture resistance of endodontically treated teeth, *J Prosthet Dent* 63:529, 1990.
15. Southard DW: Immediate core buildup of endodontically treated teeth: the rest of the seal, *Pract Periodont Aesthet Dent* 11:4, pp. 519-526, 1999.
16. Stabholz A, Friedman S, and Tamse A: Ch. 25, Endodontic failures and retreatment, *Pathways of the Pulp*, 6th ed., Mosby Co., St. Louis, 1994.
17. Stropko JJ: Canal morphology of maxillary molars: clinical observations of canal configurations, *J Endod* 25:6, pp.446-450, 1999.
18. Weller RN, Niemczyk SP, Kim S: Incidence and position of the canal isthmus. I. Mesiobuccal root of the maxillary first molar, *J Endod* 21:380, 1995.

POST-TEST

V1331 Nonsurgical Retreatment: Disassembly & Missed Canals, Quality & Profitability

1. An issue that should be considered when choosing between retreatment or extraction is:
 - a. what does the patient want.
 - b. is it a strategic tooth.
 - c. is the tooth restorable.
 - d. all of the above.

2. Generally, clinicians prepare the access cavity through a restoration if it is judged to be:
 - a. functionally designed, well-fitting, and aesthetically pleasing.
 - b. the most cost-effective way to proceed.
 - c. desirable to the patient.
 - d. better than any alternative choice.

3. In a maxillary first molar, the clinical presence of an MB2 system is over:
 - a. 60% of the time.
 - b. 75% of the time.
 - c. 90% of the time.
 - d. none of the above.

4. The tool that has a wedging device at its working end that when activated is designed to dislodge restorative segments is the:
 - a. Wynman Crown Grippers.
 - b. Crown Splitter.
 - c. Coronaflex.
 - d. Metalift.

5. In general, restorative removal devices can be divided into the following three categories:
 - a. nonactive, vibratory, and active instruments.
 - b. grasping, percussive, and active instruments.
 - c. nonactive, active, and reactive instruments.
 - d. passive, forceful, and intermediary instruments.

6. The best placement of the KY Pliers in the removal of a restorative is:
 - a. on the occlusal aspect of the tooth.
 - b. on the cervical aspect of the tooth near the gingival margin.
 - c. on the buccal and lingual surface of the tooth below the heights of contour.
 - d. none of the above.

7. A passive device for removing restoratives that involves a precision channel is the:
 - a. Kline Crown Remover.
 - b. Coronaflex.
 - c. Crown-A-Matic.
 - d. Metalift.

POST-TEST (CONT'D)

**V1331 Nonsurgical Retreatment:
Disassembly & Missed Canals, Quality & Profitability**

8. An advantageous feature of the Micro-Opener is:
- a. an offset handle.
 - b. double and triple tapers.
 - c. it can be precurved.
 - d. all of the above.
9. Which of the following is not a specific technique mentioned for locating previously missed canals:
- a. explorer pressure
 - b. the champagne test
 - c. the dentinal line test
 - d. ultrasonic instrumentation
10. During endodontic retreatment procedures, vision may be enhanced by:
- a. magnification.
 - b. transillumination.
 - c. removing the restorative.
 - d. all of the above.

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