

Apical Periodontitis is a biofilm related chronic infectious disease that occurs very frequently (high prevalence)

Table 2: Prevalence of apical periodontitis and root-canal fillings

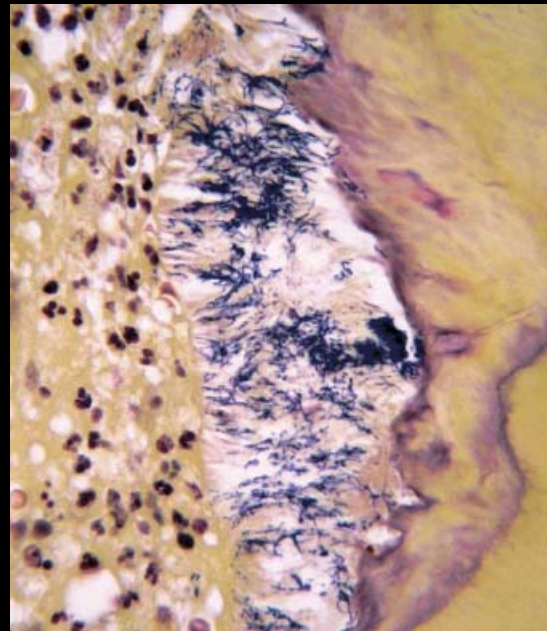
Author	Year	Country	N° of teeth	% AP	% endo	% endo with AP
Bergs tröm et al.	1987	Sweden	6593	3,5	6,5	28,8
Eckerbom et al.	1987	Sweden	4889	5,2	13,0	26,4
Ödesjö et al.	1990	Sweden	17430	2,9	8,6	24,5
Eriksen & Bjertnes	1991	Norway	2940	3,5	6,0	36,6
Imfeld	1991	Switzerland	2004	8,4	20,3	31,0
De Cleen et al.	1993	The Netherlands	4196	6,0	2,3	39,2
Eriksen et al.	1995	Norway	2981	1,5	3,4	18,0
			3917	1,4	3,4	25,6
			3282	0,6	1,3	38,1
Buckley & Spangberg	1995	USA	5972	4,1	5,5	31,3
Weiger et al.	1997	Germany	7987	3,0	2,7	61,0
Saunders et al.	1997	United Kingdom	8420	4,9	5,6	58,1
Marques et al.	1998	Portugal	446	2,0	1,5	21,7
Sidaravicius et al.	1999	Lithuania	3892	7,2	8,2	35,6
Kirkevåg et al.	2001	Denmark	15984	3,4	4,8	52,2
Boucher et al.	2002	France	5373	7,4	19,1	29,7
Lupi-Pegurier et al.	2002	France	7561	7,3	18,9	31,5
Dugas et al.	2003	Canada	16148	3,2	2,5	45,5
Jiménez-Pinzón et al.	2004	Spain	4453	4,2	2,1	64,5
Loftus et al.	2005	Ireland	7427	1,6	2,0	25,0
Georgopoulou et al.	2005	Greece	7664	13,6	9,2	60,0

% AP: percentage apical periodontitis
 % endo: percentage endodontically treated teeth
 % endo with AP: percentage endodontically treated teeth associated with apical periodontitis

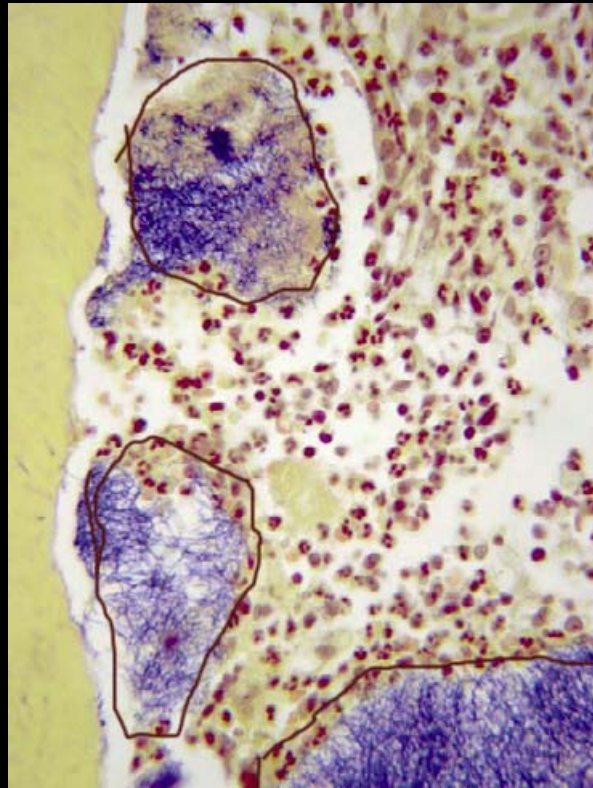
Anatomy is destiny for the endodontic bacterial biofilm ecology, it's content provides “bed and board” to the microorganisms.



The endodontic biofilms grow slowly and may at the beginning be essentially non-pathogenic but still capable of causing inflammation and destruction of the periradicular tissues.



Buildup of bacterial biofilm in the lumen and walls of the root canal systems are the endodontists biggest problems.



Ricucci

Undeniable direct observations with TEM and SEM have established that the bacteria causing AP grow in matrix enclosed biofilms.

Insert CARR's TEM'S and SEM'S

Epidemiological studies disclose that overall endodontic treatment quality is low with a high failure rate when done by the general dental practitioner.

(Eriksen 1991)

(Dugas et al,2003)

(Kirkevang et al.,2001)

The requirements for retreatment of the general population with endodontic therapy are high.

