

Microbial etiology of endodontic treatment failure

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There have been many studies that have evaluated success and failure of endodontic treatment (Nair, Sjogren), but there is remarkably limited information concerning the specific microorganisms that are involved in the teeth with treatment failure.

Microorganisms that survive root canal treatment to cause a persistent infection must possess specific characteristics to avoid the host defense. These can be broadly classified as;

1. Sequestration: A physical barrier between the microbe and the host.
2. Cellular evasion: Microorganisms avoid leukocyte dependent antibacterial mechanisms.
3. Humoral evasion: Extracellular bacteria avoid the hosts antibodies and complement.

The present lecture focused on the etiology of apical periodontitis, the microbial patterns, especially, specific microflora that isolated in failed root canals with persistent infection, and management of microbial problem.