Pulpal pain diagnosis--a review.

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Evidence gathered from our studies and the work of others appears to support the presence of two distinct nerve pain pathways in the dental pulp, represented by fast conducting A-delta and slow conducting C-fibers. Each of these types of fibers has different pain characteristics: A-delta fibers evoke a rapid, sharp, lancinating pain reaction, and C-fibers cause a slow, dull, crawling pain. Pain response thresholds vary in different regions of the tooth, and thermal, osmotic, ionic, and electric stimuli involve different mechanisms to provoke nerve excitation of the dental pulp. Evidence also points to the fact that the incidence of pain increases as the histopathosis worsens. On interrogation, patients who manifest severe or referred pain almost always give a previous history of pain in the tooth with the ache. Eighty percent of patients who give a previous history of pain manifest histopathologic evidence of chronic partial pulpitis with partial necrosis, the untreatable category, for which endodontics or extraction is indicated. The other 20% exhibit histopathosis of the pulp with slight inflammation to chronic partial pulpitis without necrosis, a treatable category. Clinically, one can determine the degree of pulp histopathosis by asking the patient about a previous history of pain in the involved tooth. This history of previous pain adds another dimension in diagnosis for the clinician as to whether the painful pulpitis is reversible. This information also aids in referred pain localization.

PMID: 11199715 [PubMed - indexed for MEDLINE]