

Reuters Health

Wire Service

December 8, 2006

Abscessed Teeth Can Be Saved in Children With Immature Permanent Teeth

By Karla Gale

NEW YORK - New endodontic techniques can permit tissue regeneration in immature permanent teeth in which the pulp has died, teeth that conventionally would be treated with root canal therapy, Dr. Ling-Huey Chueh and Dr. George T.-J. Huang report in the December issue of the Journal of Endodontics.

These innovations reflect a "paradigm shift" from apexification to apexogenesis in such circumstances, the authors maintain. Favorable conditions are provided to allow natural tissue regeneration and to maintain normal apical morphology.

"Because the tissue inside immature teeth is so vascular, with good proximity to stem cells, they can be revascularized," Dr. John Olmsted told Reuters Health. Dr. Olmsted is president of the American Association of Endodontics and a faculty member of the University of North Carolina in Chapel Hill. Dr. Chueh from the Elite Dental Clinic in Taipei, Taiwan, and Dr. Huang from the University of Maryland in Baltimore, present four case reports of children, ages 9 to 10 years, diagnosed with pulp necrosis with periradicular periodontitis or abscess.

The problem with conventional root canal treatment, the authors explain, is that the roots fail to mature, remain thin and weak, and are susceptible to fracture.

The endodontists instead used no instrumentation of the canal other than irrigation with sodium hypochlorite. Over the next 4 to 5 years, the apex matured and the roots grew to normal lengths.

The best candidates for apexogenesis are children with permanent teeth in which the roots are still open, Dr. Olmsted said. He also believes that teeth that have loosened as a result of trauma, such as car accidents or sports events, can also be saved with similar techniques.

"The future of endodontics is exciting, now that we have the possibility of regenerating pulp tissue," Dr. Olmsted added. In light of the promising initial results, the Academy has formed a "Regenerative Endodontics Committee."

Dr. Olmsted cautions, though, that it will probably be 5 years or more before apexogenesis will become routine practice.

J Endod 2006.