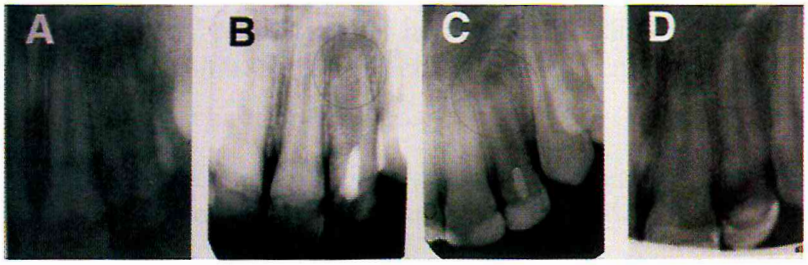
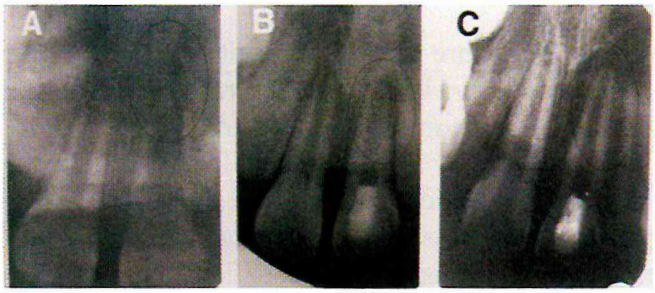
Happy Independence Day

c)Bacterial tight seal of the access opening

Given the importance of a bacteria free environment, a tight coronal bacterial seal of the access opening is a must.





Concept behind revascularization

Revascularization of a partially necrotic pulp in an immature root is based on the concept that vital stem cells located in the apical papilla and some vital pulp stem cells in the apical canal can survive pulpal necrosis, even in the presence of a periradicular infection. These stem cells are believed to differentiate into secondary odontoblasts, ultimately allowing for root maturation while maintaining the vitality of tooth[7].

Advantages

The literature indicates several advantages of promoting apexogenesis in immature teeth with open apices:

1. Technically simple, can be completed using currently available instruments and medications[6].
2. Obtain a longer and thicker root, thus strengthening the tooth against fracture[7].
3. With a fully formed apex, the prognosis for any future root canal treatment would be much better than any attempt to obturate an open apex[1].
4. The regeneration of tissue by patient's own blood cells avoids the possibility of immune rejection and pathogen transmission from replacing the pulp with a tissue engineered Construct[6].

Drawbacks

1. Lack of data on root canal morphology and pulpal cellular composition following treatment[7].
2. Possibility of canal calcification, so difficult to treat the tooth endodontically in future[7].
3. It is difficult to case select appropriate teeth that clinically test nonvital, but maintain vital apical cells believed to be necessary to successfully perform the procedure[7].
4. Various systemic and immunologic problems may offer other obstacles[7].
5. Crown discolouration[5].

6. Development of resistant bacterial strains[5].
7. Allergic reaction to the intracanal medication[5].
8. The concentration and composition of cells trapped in the fibrin clot is unpredictable, so may lead to variations in treatment outcome in older patients[6].

Future perspective

However, several concerns need to be addressed in prospective research.

1. The source of the regenerated tissue has yet to be identified.
2. Future research for a biological material capable of inducing angiogenesis and allowing a more predictable scaffold and tissue regeneration[5].
3. The use of PRP for the revascularization process.
4. The nature and histologic appearance of the new tissue formed in root canal and the tissue Causing increase in root length and thickness is also unknown.

Conclusion

Recently, the concept of revascularization of necrotic pulps regained interest and became an alternative conservative treatment option for young permanent teeth with immature roots. This novel procedure exploits the full potential of the pulp for dentine deposition and produces a stronger mature root that is better able to withstand fracture.

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