Radiographic Evaluation of Extruded Obturation Materials

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Aim
- To radiographically evaluate, over time, sealer and/or GP extruded into periradicular tissues.

Materials & Methods
- 92 overextension cases were identified.
- All cases were filled with GP + ZOE based sealers.
- Pre-op. radiographs were evaluated for presence or absence of PAR.
- All cases completed by the primary author during a 9-yrs. period.
- The recall radiographs ranged from 4 months to 6 1/2 yrs.
- Recall radiograph was compared with the previous radiograph and the amount of material was judged as unchanged, less, or absent.
- The apical region was also evaluated for evidence of change: lesion smaller or absent, lesion unchanged, lesion developed at each recall.
- Both authors independently evaluated all radiographs.
- Only 50 cases were followed up from 4 months to 5 yrs. or more.

Results
- 96% showed radiographic repair (48/50 cases).
- 4% were diagnosed as unchanged. (2/50 cases).
- The majority of the extruded material appeared to be sealer.
- Consistent loss of extruded material occurred whether or not a PAR was present.
- The extruded material was unchanged in only 3 recalls.

Conclusion
- Healing will occur if canals are well obturated, even if some obturation material is extruded into the periradicular tissues.
- ZOE-based sealers, extruded into periradicular tissues during root canal filling, disappear from successive recall radiographs.
- There is evidence that, given enough time postoperatively, all extruded sealer will be removed.
- There is evidence that GP is more resistant to removal than the ZOE-based sealers.

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