A Statistical Analysis of Surgical and Nonsurgical Endodontic Retreatment Cases

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**Aim**
- To determine factors that may have contributed to the failure of the original treatment or the success of the retreatment.

**Materials & Methods**
- 1300 patients who had undergone RET were examined radiographically by one examiner.
- The following information was recorded prior to RET:
  a- Age, sex and tooth type
  b- Symptomatic/asymptomatic
  c- PAR/no PAR
  d- Philosophy of treatment (silver point, standardized prep + GP or flared preparations + heated GP)
  e- Intervals between RCT and RET (<1yr, 1-2yrs, 2-5yrs, >5yrs, unknown)
  f- Type of original treatment (GP, silver points, broken instrument, paste fill, surgical treatment alone, combined treatment, undetermined)
  g- Reasons for RET (short fill, overfill, no fill, perforations, restorative reasons, failed RET, acceptable but failing)
- The following information was recorded after RET:
  a- Method of RET (conventional, apico only, apico + retrofilling intentional reimplantation)
  b- Follow-up (<6months, 6–12months, >1 yr.)
  c- PAR/no PAR

**Results**
- At the time of RET, 59.2% presented with symptoms & 87.5% had PAR.
- Statistically largest group was retreated 1 to 2 yrs. after the original treatment.
- RET was indicated most often because of short fillings.
- Of the 633 cases which had recalls of more than 6 months:
  a- 415 were judged successful (65.6%)
  b- 116 were considered to be uncertain (18.3%)
  c- 102 were judged as failure (16.1%)
- Permanently restored teeth after RET had more success than those which did not receive permanent restoration.
- Non-surgical RET had the highest success rate of 72.7%, followed by apico + retro fill 60%.
- When divided by reasons for RET:
  **Restorative purposes** = 96.2% success  
  **Missed canals** = 81.7% success  
  **Short fills** = 66.4% success & for overextended fills = 62.2% success  
  **Perforation RET** = 62.5% success  
  **Previously failing RET** = 47.1%

**Conclusion**
- RET of endodontic failures is a valid alternative to extraction & its success rate can be considered good.

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