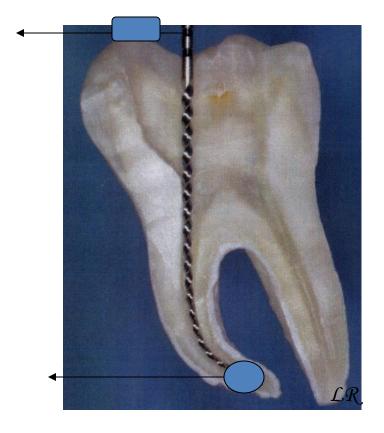
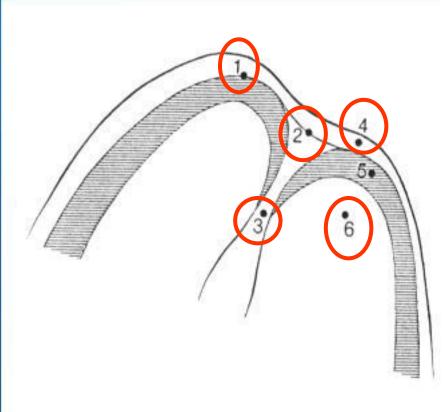
## Working length

### Working length

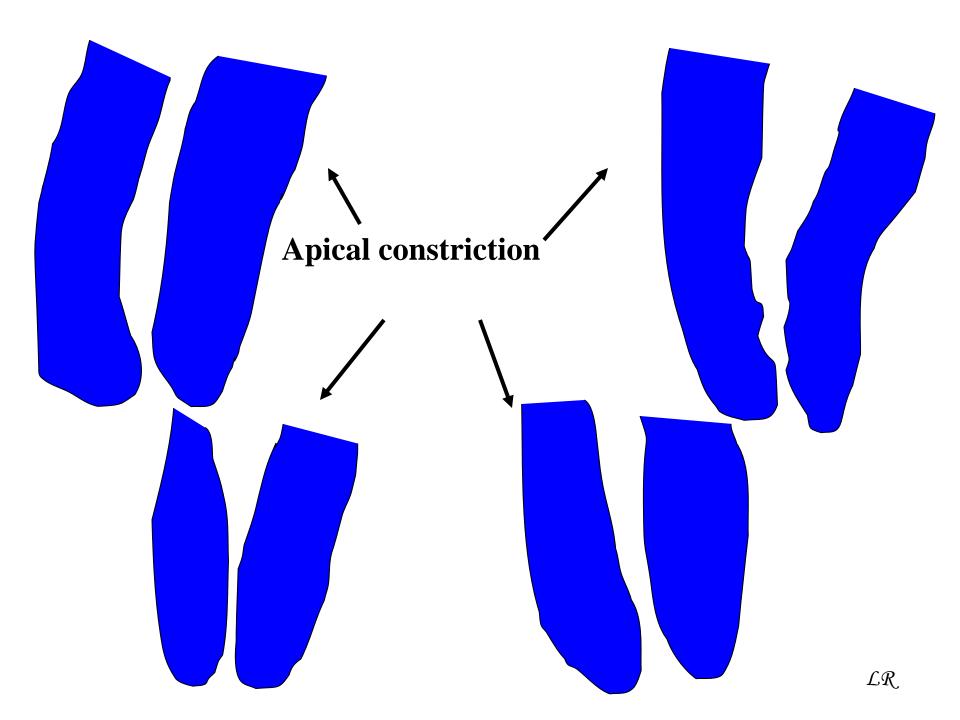
 Distance between referential point on tooth crown an apical constriction



### Apical morphology

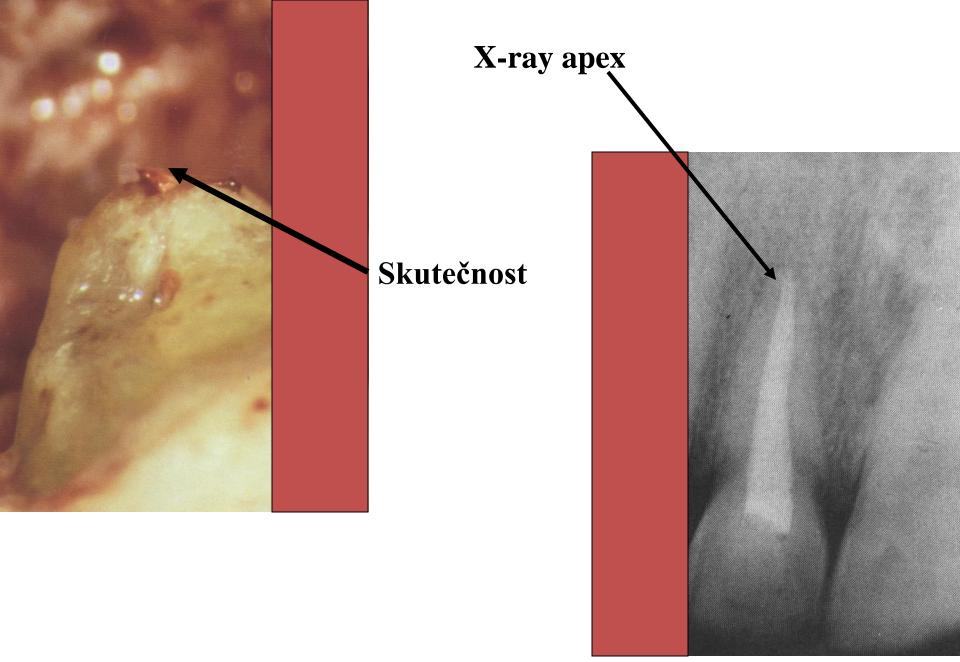


- 1. X-ray apex
- 2. Apical foramen
- 3. Apical constriction
- 4. Periodontal ligament
- 5. Root cementum
- 6. Dentin



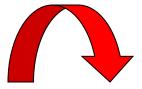
# Why RTC terminates in apical constriction?

- Small apical communication
- Less risk of damage pof periodontium
- Prevention of overfilling
- Prevention of apical transport of infected metarial
- Possibility of good removal of debris
- Good compaction of guttapercha

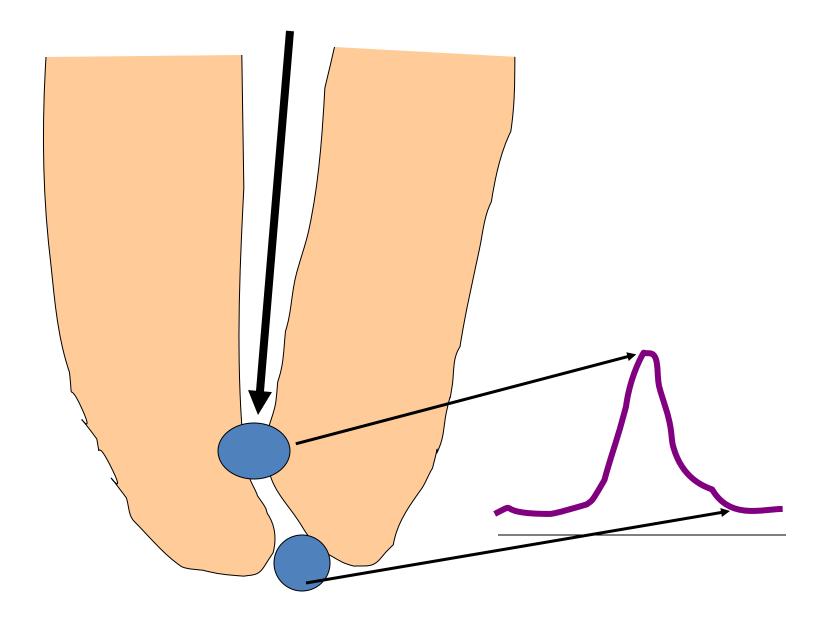


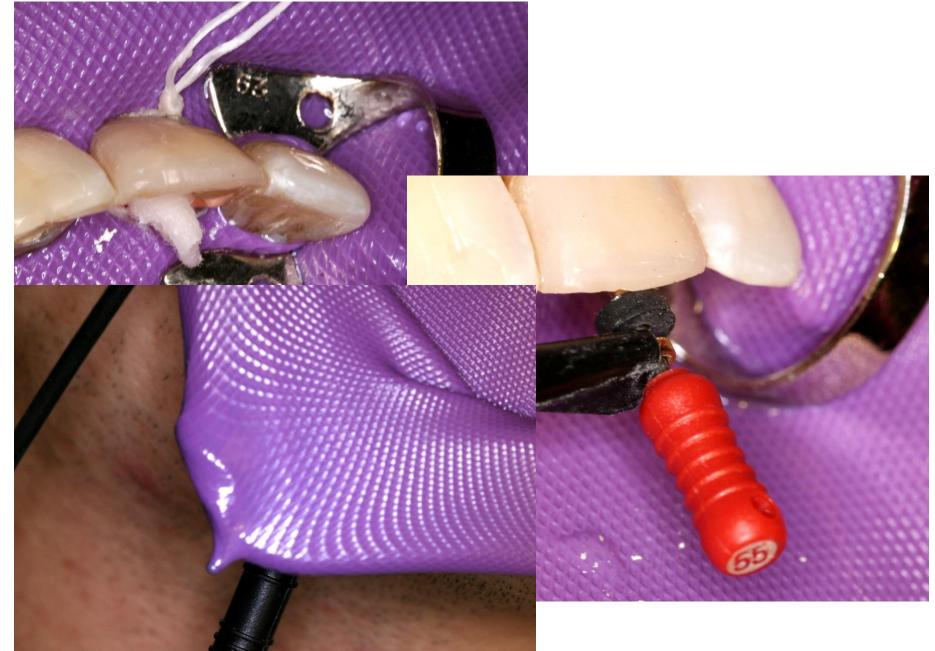
### Principle of apexlocators

Endometrie



mearurement of impedance





#### X- ray method

X-ray with root canal instrument (ISO 15 no smaller because of x ray contrast) Introduced to the safe length – this length have been measured on many teeth, we know this length for each tooth)

Take x- ray using the rubber stop at the referential point.

If there difference no more than 2 mm we can measure the working length, if more – new x ray with instrument that is introduced deeper.





