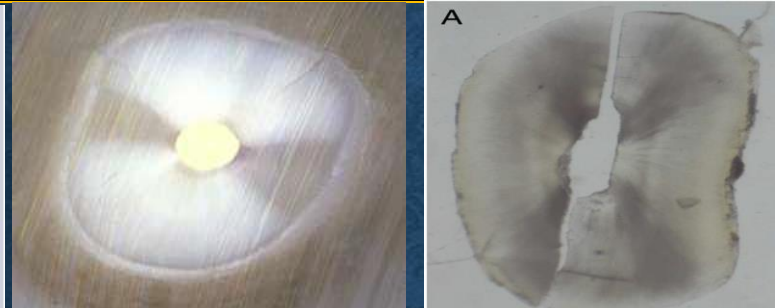
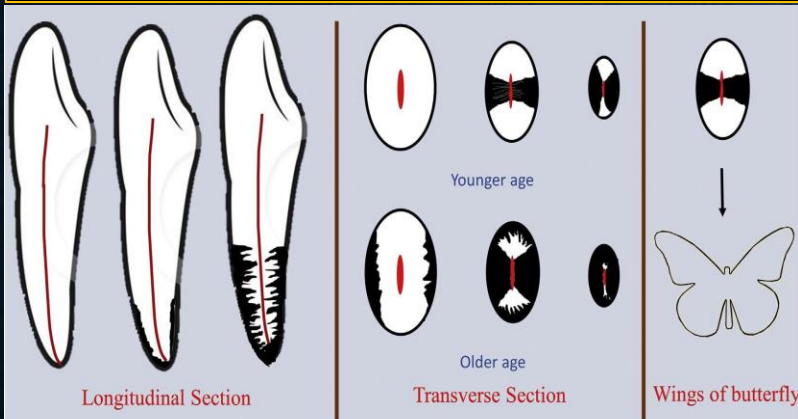


From micro to macro –mystery behind the butterfly effect



What is butterfly effect ?

The “butterfly” effect is an optical phenomenon was first photographed by Beust in 1931, Which is observed in some transverse section of some tooth roots . It has been attributed to dentinal tubular sclerosis differs in the mesiodistal and buccolingual directions, noting a characteristic butterfly shape in transverse sections of the roots caused by different shades of dentin .

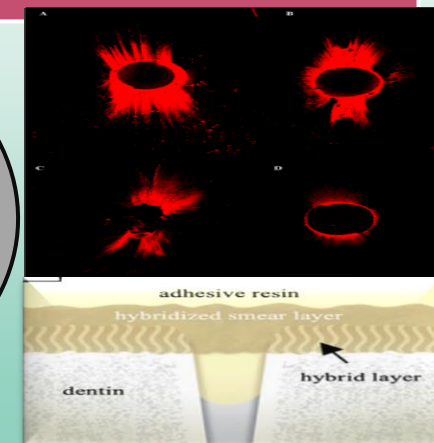
vertical root fracture(VRF)

In teeth with butterfly effect crack ran predominantly in buccolingual direction which may explain prevalence of VRF in this direction



Sealing ability and adhesion of dentin

Sealing ability of resin-based sealers is affected
The presence of sclerosed dentin and obliterated tubules negatively affects the formation of resin tags required for the adhesion of composite restorative materials.



Adverse effect of intracanal medicaments



Dentin microhardness values decreases after treatment with calcium hydroxide and double antibiotic paste.