UNIVERSITY ,,GOCE DELCEV”- STIP
Faculty of Medical Science
Dental Medicine

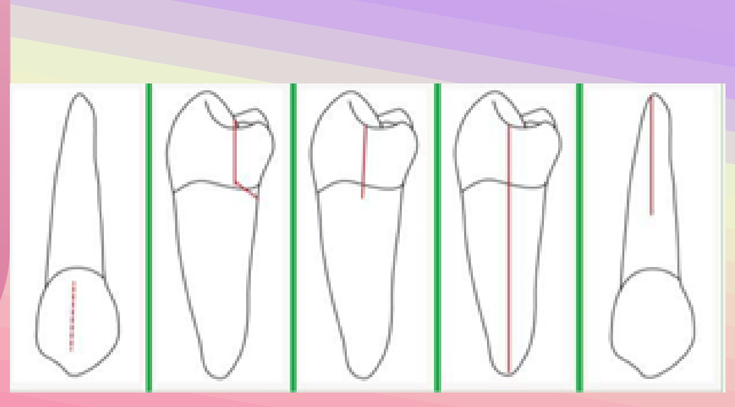
CRACKED TOOTH SYNDROME

Natasha Longurova Ph.D, Ivona Kovacevska Ph.D,Katerina Zlatanovska Ph.D Sanja Nashkova Ph.D, Verica Toneva

Cracked tooth syndrome is defined as an incomplete fracture of the dentine in a vital posterior tooth that involves the dentine and occasionally extends into the pulp. CTS is the third leading cause of tooth loss in adult patients. Mandibular molars are most commonly affected teeth.

The aim of this paper is to indicate the frequency and significance of cracked tooth syndrome. To investigate the etiological factors and the mechanism of occurrence, as well as to present the clinical picture and the specificity of the diagnostic protocol. Of course, guidelines should be given to make the right decision for therapeutic procedure, because especially in patients with CTS, the individual approach is of great importance.

For the preparation of this paper, a search was made of papers from the last 10 years from a relevant database from MEDLINE® / PubMed®, Science Direct®.



Picture: 5 classes of longitudinal teeth fractures. From left to right – infraction, tuber fracture, cracked tooth, split tooth, and vertical root fracture

Given the difficult diagnosis of CTS, it is necessary to distinguish some terms. The American Association of Endodontists (AAA) has divided longitudinal tooth fractures into 5 classes: infraction, crown fracture, cracked tooth, split tooth, and vertical root fracture.

The diagnosis of CTS is often problematic and has been known to challenge even the most experienced dental operators, accountable largely by the fact that the associated symptoms tend to be very variable. Complications of CTS are involvement of the pulp and/or periodontal ligament, cusp fracture or loss of tooth vitality. In order to diagnose CTS, dentist should elicit thorough dental history, do the clinical examination and use clinical tests such as visual dying, vitality tests, dental radiograph imaging and endodontic microscope.

Early detection avoids a number of complications and ultimately can prevent tooth loss. The inability to visualize the crack during the clinical examination reduces the probability of making a correct diagnosis. In order to carry out the best possible treatment, it is necessary to take into account all the factors from the occurrence of the syndrome, the condition and the prognosis of the tooth. Therapy varies according to the position and extent of the fracture.