

Causes for trigeminal nerve injury

- ▣ anesthesia
- ▣ Teeth extraction
- ▣ Dental implants
- ▣ Root canal treatment
- ▣ Surgical procedures
- ▣ Maxillary floor augmentation

THE WISDOM TRIANGLE MANAGING THE RISK OF 3RD VS. 5TH

Rood criteria, cbct and coronectomy

N. Givol DMD OMFS
Soroka university medical center
A. Ilgijayev DMD OMFS
Israel Defense Force

Me worry?

- 100% give anesthesia
- 41% insert dental implants
- 34% extract impacted wisdom teeth
- 24% preform augmentations
- 21% preform periodontal surgery

M.R.M data base for causes to trigeminal injury

- ▣ 27% of trigeminal injuries are due to wisdom teeth extractions

Injury du to wisdom tooth extraction

- ▣ 1-0.5% permanent injury
- ▣ Lingual or IAN
- ▣ 5000 - 10000 patients a year in USA

Wisdom teeth extraction

- ▣ The most common procedure in oral surgery
- ▣ About ten million teeth each year in USA

Injury due to wisdom tooth extraction

Injury to ian

- ❑ Happens during root removal
- ❑ The operator should understand the relation between the roots and the mandibular canal and indentify the risk

Back to bases

- ❑ The best treatment is prevention
- ❑ Consider the indications
- ❑ Avoid myths:
 - ❑ 1. There is more pathology around wisdom teeth.
 - ❑ 2. Extraction at early age is less traumatic
 - ❑ 3. Anterior crowding is a result of third molar eruption

Rood criteria

Seven radiographic signs of the relations between the root and the mandibular canal

Root related:

Darkening of the root
Deflection of the root
Narrowing of the root
dark bifid root apex

Canal related:

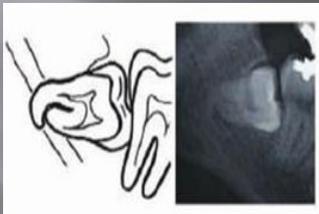
Narrowing of the canal
Diversion of the canal
Interruption of the white line

In surgical procedures

Main cause to injury is wrong interpretation of the imaging



Deflection of the root



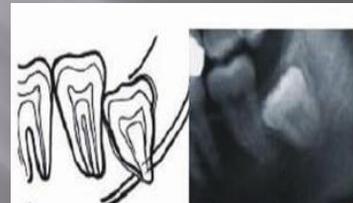
Darkening of the root



dark bifid root apex



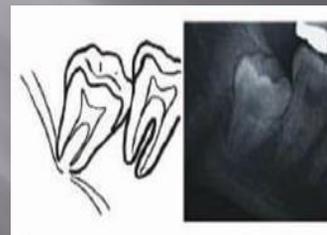
Narrowing of the root



diversion of the canal



Narrowing of the canal

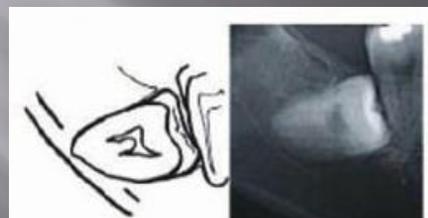


Do we know Roods criteria

Interruption of white line is well known

The other signs are not known enough

Interruption of the white line





cbct

□
 Cbct is the Gold standard in oral imaging
 Several issues are associated with the use of CBCT

BMJ MAY 2013

- Study of patients 0-19 years old
- Had CT exams between 1985- 2005
- A year post CT 24% more cases of malignancies un the study group
- 5-10 years post CT more malignancies

eao

“Medical exposure ... shall show a sufficient benefit, weighting the total potential diagnostic of therapeutic benefits it produces ... against the individual detriment that the exposure might cause, taking unto account the efficacy, benefits and risks of available alternative techniques...”

Minimize the risk

optimization

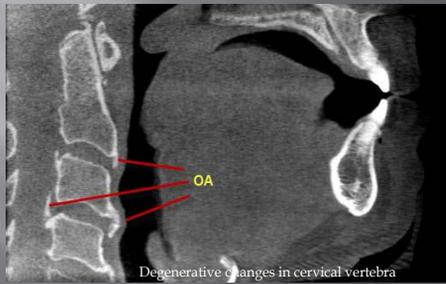
- When referring for imaging a specific question should be ask to clarify what information we expect to get from the imaging
- The radiologist should decide if the imaging would answer the question

Minimize the risk

Justification: “whether the benefits outweigh the risks”

“ Each patient should be considered an individual. Routine protocols of imaging are not compatible with this”

Example



Allareddy, Veeratrishul. "Incidental findings on cone beam computed tomography." Thesis, University of

Interoperation of imaging

Traditionally dentist make their own interpretations of the imaging

CBCT: Enlarges the scope of imaging

In the filed of imaging

In the resolution of imaging

Some of the dentists lack the knowledge for proper interpretation

Summery

- ▣ Indications
- ▣ Risk evaluation
 - Understanding panoramic X ray
 - CBCT benefits and risks
 - Alternative modes of treatment

PARTIAL ODONTECTOMY

- ▣ Direct relation between the roots and the canal
- ▣ Removal all parts of the crown below bone height
- ▣ Re-entry is needed in 2-6%
- ▣ If infection occurs the root migrates far from the canal

THANK YOU

