Wisdom Teeth in Adults. Strategy and Management Based on a Rare Case.

By Dr. Benoît Philippe, UAE

Extractions of wisdom teeth in adults are known to have sometimes certain peculiarities in particular ankylosis and increased frequency of extensive cystic lesions favouring immediate or secondary iatrogenic fractures.

The objective of this publication is to present, from a specimen case as per the size and two-dimensionality of the abnormalities noted, the thinking that preceded the surgical procedure and the execution of the surgical act.

Diagnosis Circumstances

The patient is an adult male aged 48, without specific medical and surgical history. He was referred for medical advice and possible surgical care with regard to his asymptomatic impacted third molars. The clinical situation contrasts with the radiographic table found.

Dental Pan

Four (4) impacted third molars are highlighted 38 is positioned along the dental pedicle, inverted and shows a periconical cyst in the vicinity of the dental nerve. 48 vertical is particularly low-located, its roots projecting on the area of the basal border. 28 and 38 included high-located, show divergent roots positioned in the sinus cavities. Radicular ankylosis is objectified to the absence of periodontal radiolucent area. (Figure 1)

Scanner

The computed tomography examination specifies the diagnosis and confirms the surgical difficulty of these extractions.

At the Mandible

38, in addition to its close proximity to the dental pedicle it shows a periconical cyst in contact with its inferior alveolar nerve. Its crown, inverted and extremely large stresses its retentive character (Figures 2a to 2d). 48, vertically positioned, is located on the lingual side of the inferior alveolar nerve; its roots contained in the lingual table. The apexes are located below the mylohyoid mus- cule in immediate contact with the submandibular gland and near “the facial artery that runs through the posterior superior part of the gland before turning around the bottom edge of the mandible” (ii) 48 shows a periconical cyst developed mainly on the distal side of its crown. (Figures 3a to 3d)

Concerning 38, the submental development of the endo-oral cystic lesion exposes in a near future to a sudden increase of its dimensions by complete blockage of the sinus because of the high risk of oro-antral communication, 38 and radiologically asymmetrical is maintained as it is (there is especially no endo-antral image).

Information and Informed Consent Strengthened

The surgical indication is confirmed to the patient despite the absence of symptoms. The option of general anaesthesia is selected because of the difficulty of the surgical procedure.

Given the mandibular anatomical lesions and especially their bilateral nature, the information provided to the patient insist on the increased intraoperative and postoperative risk of mandibular fracture and destruction of the alveolar nerve by direct hit (surgery, burning) or indirect hit (tear in case of fracture). The information stresses the same way on the risk of direct or indirect hit of the lingual nerve itself particularly fragile and located in the immediate vicinity of the roots of 48. Because of the high location of 28 and the divergence of its roots, the risk of oral sinus communication is clearly indicated.

Surgical Strategy

In order to perform the surgery in the best technical conditions (espe- cially in the absence of trismus as a result of an inflammatory decompen- sation) it is recommended to perform these extractions ‘in cold situation’ and in two times (high fracture risk) 38 and 28 are programmed in a first phase and 48 in a second phase to 6 months.

Surgical Procedures and Anaesthesia

In order to have the best accessibility, the intubation is performed using an endonasal probe during both surgeries.

Concerning 38, several technical rule- tures are worth mentioning:

- The route for the approach and the separation are expanded (the incision covers the entire sillon of 38 and the retromolar triangle and is completed by two long discharge incisions).
- The use of ultrasound allows, due to ankylosis, an efficient cleavage be- tween the dental tissue and the bone tissue.
- The separation of the cystic lesion is performed using the micro raspa- tor for its envelope.

The vestibular osteotomy carried out using the piezoelectric tool spreads over the entire height of 28. The cy- stic lesion (polyp) is enucleated in full (Figure 5).

Concerning 48, despite a widened approach path (in 47, the vestibular and palatal incision) is extended from the distal surface of the tooth until the anterior edge of the ramus; the procedure is to keep intact the outer table and the basal margin of the mandible. The extraction is performed through the lingual path. Careful subperiosteal separation concerns the lingual table with regard to 47 and the retromolar triangle. A malleable blade to protect

Clinical Case

Given the inflammatory adhesions, a special attention is given to the lower pole of the cystic lesion: - The enucleation of the periconical cyst is performed without any pull- ing on its envelope.

Concerning 28, the submental incision spreads from 26 until the impacted tuberosity, completed by two wide vertical discharge incisions led until the bottom of the vestibule.

Apart from an acute painful episode on the right side that occurred dur- ing chewing on the third postopera- tive day, there is no complication besides the risk of bleeding (peri- and intraoperative).

The panoramic shot of late medical supervision reveals a satisfactory bone healing, in particular the disappearance of radiolucent images in 48 and 48 and the absence of opacity in the left sinus cavity which is a proof of a good ventilation (Figure 7).

Conclusion

With impacted wisdom teeth in adults, the importance of anoma- lies (ectopia, ankylosis, cystic lacerum, nervous vicious) imposes an in- creased obligation to provide further information. Nevertheless, with le- sions having a possible risk of acute infectious decompensation, the preventive extraction in the absence of infectious lockjaw seems to be rec- ommended. The two-sidedness of the lesions imposes a two-step pro- cedure. Despite the implementation of a sequence and a suitable surgical technique, nervous or fracture com- plications are always possible due to adhesions, ankylosis and loss of pre- operative cystic and postoperative iatrogenic bone substances.

References

P. Kamar - *Précis d’Anatomie Clinique*, volume II, 2nd Edition Malikin 204 300-301,

Postoperative, Medium Term Monitoring

Apart from an acute painful episode on the right side that occurred dur- ing chewing on the third postopera- tive day, there is no complication besides the risk of bleeding (peri- and intraoperative).

The panoramic shot of late medical supervision reveals a satisfactory bone healing, in particular the disappearance of radiolucent images in 48 and 48 and the absence of opacity in the left sinus cavity which is a proof of a good ventilation (Figure 7).

Conclusion

With impacted wisdom teeth in adults, the importance of anom- alies (ectopia, ankylosis, cystic lacerum, nervous vicious) imposes an in- creased obligation to provide further information. Nevertheless, with le- sions having a possible risk of acute infectious decompensation, the preventive extraction in the absence of infectious lockjaw seems to be rec- ommended. The two-sidedness of the lesions imposes a two-step pro- cedure. Despite the implementation of a sequence and a suitable surgical technique, nervous or fracture com- plications are always possible due to adhesions, ankylosis and loss of pre- operative cystic and postoperative iatrogenic bone substances.

References