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Aim: The extraction of mandibular third molars is one of the most frequent procedures in oral surgery. As well as all surgical intervention, it can cause complications if an appropriate clinical and radiographic evaluations didn't make before the surgery. The most serious complications described in literature are the injury of the inferior alveolar nerve (IAN) or lingual nerve and mandibular fracture. Different clinical and radiographic variables need to be evaluated before the extraction of a lower third molar: grade of impaction, angulation, available space, depth, bone density, relation with the mandibular canal, buccolingual position, dental morphology. A buccolingual position of the tooth in relation to the mandibular lingual and buccal walls is an important factor to consider when calculating the scale of surgical difficulty. Sometimes the tooth is totally lingual and the cortical plate is very thin. The aim of this case report was to show a specific complication related to a migration of the lower third molar in the sublingual space.

Methods: A 35-year old male patient was referred to the Department of Oral Surgery of the University of Naples "Federico II" with complaint of pain symptoms, slight swelling on the right side of the mandible, discomfort during swallowing and limitation in mouth opening. Clinical observation shows the presence of a semi-included 4.8, without signs of acute inflammation. Radiographic examination (orthopantomography and CT cone-beam) showed the inclusion of the tooth and its predominantly lingual version, with a thin lingual cortical plate. After locoregional anesthesia, a full-thickness mucoperiosteal flap was raised. The incision of the flap extended from the vestibular side of the retromolar trigone to the marginal periodontal portion of the second molar, corresponding to its distolingual cusp. The incision was continued in a vestibular direction around the intrasulcular surface of the second molar. A vestibular-relaxing incision was then made, between the first and second molars, at 45° angle. During luxation, the tooth migrated in the sublingual space. Urgent OPT and CBCT were requested to evaluate the exact position of the tooth. An incision starting from distolingual angle of second molar was extended at gingival margin of the first premolar. The lingual flap was raised and the dislocated tooth was found by means of blunt dissection and grasped with dental forceps and removed. The mucosa was sutured with a 4/0 absorbable suture. Patient was given oral antibiotics and corticosteroids for 1 week.

Results: The healing process and the post-operative recovery were uneventful. No complications occurred such as bleeding, paresthesia, excessive edema and sense of constriction of airflow. The patient was clinically examined just after 3 days, 7 days (in concomitance with suture removal), 14 days after, one month after

and 6 months after.

Conclusion: An adequate clinical and radiological evaluation is essential for risk assessment and surgical difficulty in order to prepare an optimal treatment plan. The complications, although rare, are distressing for patients and, sometimes, they could be difficult to manage, if the operator is not experienced.

Carcinosarcoma of the parotid gland with osteosarcomatous differentiation: a case report

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Aim: The carcinosarcoma is a rare and aggressive true malignant mixed tumor composed of epithelial and mesenchymal malignant elements. It may occur from longstanding or recurrent pleomorphic adenoma or arise de novo. We report an extremely rare case of carcinosarcoma de novo harboring an osteosarcomatous component, together with literature review of the reported cases.

Methods: On September 2019, a 68-year-old smoker female subject presented to the Department of Maxillofacial Surgery, Ancona General Hospital, with a painless swelling in the right zygomatic area, which increased in size during the last 6 months. Clinical examination revealed a mobile and tense-elastic swelling without facial weakness or palpable lymphadenopathy. The preoperative Magnetic Resonance Image showed oval lesion measuring cm 4.1x3.5x2.3, composed by multiple cystic areas, in the right cheek mucosa in close proximity to the coronoid process of the jaw. No regional lymph nodes metastasis was detected. The patient underwent to right parotidectomy with partial resection of involved masseter muscle. The surgical specimen was sent to the Institute of Pathology of the Marche Polytechnic University.

Results: Macroscopically, the parotid gland showed a whitish, solid and hemorrhagic nodule, measuring cm 5x3. Microscopically, a biphasic neoplasia, composed of a moderately differentiated adenocarcinoma, NOS, (CK7+, CAM 5.2+, p63-, Desmin-, Vimentin-, S100-, BHCg-) and osteosarcoma (Vimentin+, Desmin+, p63+), with spindle cells (SMA+) and osteoclast-like giant cells (CD68+, Catepsin k+), was observed.

The tumor proliferative activity was about 35%. No evidence of benign mixed tumor was found. Thus, a final diagnosis of carcinosarcoma de novo of parotid gland, was rendered. The patient received adjuvant platinum-based chemoradiation therapy. Post-operative chest and abdominal Computed Tomography and Positron Emission Tomography did not reveal any signs of regional or distant metastasis. To the best of our knowledge, only 11 cases of parotid gland Carcinosarcoma with an osteosarcomatous differentiation have been reported. Usually, the sarcomatous elements are chondrosarcoma and fibrosarcoma. The most common epithelial components are poorly differentiated adenocarcinoma and squamous cell carcinoma. Local recurrences and distant metastases affected the 43% and 57% of patients, respectively. The mean disease-free survival and metastasis-free survival were equal to 6 ± 4.2 months and 5.9 ± 3 months, respectively. The death rate was equal to 57% with an overall survival rate of 7.5 ± 3.4 months.

Conclusion: We described an extremely rare case of parotid gland carcinosarcoma with osteosarcomatous differentiation. Preoperative clinical diagnosis is difficult, due to nonspecific clinicoradiological findings. Furthermore, the biphasic nature of the tumour might pose a diagnostic histological challenge. The sarcomatous element tends to predominate over the carcinoma; therefore, immunohistochemistry is recommended to distinguish carcinosarcoma from primary sarcoma. The immunohistochemical investigations also help determinate its origin. There are two main hypotheses for the genesis of carcinosarcoma. Collision theory implies development of two independent elements which then intermingle. Monoclonal hypothesis, more widely accepted, implies a common precursor in the form of dedifferentiated or pluripotent cells that undergo divergent differentiation. More than 99% of carcinosarcoma arise from pleomorphic adenomas, so entire specimen must be processed to look for any component of benign mixed tumor. Although a definitive treatment protocol has not been established, surgery and postoperative adjuvant radiotherapy are recommended. Despite therapy, over half of patients died of metastasis, especially to the lung, bone and nervous central system.

Extraction of mandibular third molars: proposal of a new scale of difficulty

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Aim: Extraction of mandibular third molars is one of

the most common procedures in oral surgery and, as with all surgical operations, appropriate clinical and radiographic evaluations are essential to avoid or reduce the incidence of any complications and to prepare an appropriate plan for treatment. The most serious complications are injury of the inferior alveolar nerve (IAN) or lingual nerve, and mandibular fracture. The objectives of the present study were therefore, first, to review the clinical and radiographic variables before extraction of an impacted third molar, and, secondly, propose and validate a new scale of surgical difficulty based on variables not previously considered (relating to morphological abnormalities, the type of undercut, and the transverse position of the tooth).

Methods: Two hundred patients with impacted third molars were enrolled, and a preoperative clinical and radiographic assessment of difficulty was made by an oral surgeon using the new index. The variables considered were: angulation, available space between the ramus of the mandible and the distal side of the second molar, depth according to the position of the highest portion of the third molar related to the occlusal plane and the cervical line of the second molar, bone density, relation with the mandibular canal, buccolingual position and dental morphology. Five oral surgeons with similar degree of experience then evaluated the surgical difficulty during operation. At the end of the operation the duration was recorded and the surgeons, who were not aware of the aim of the study, were asked to record the difficulty of the operation by indicating if it was simple, moderately simple, difficult, or extremely difficult. So, we assessed the reliability of the index according to the level of agreement between the preoperative and postoperative evaluations by using Kappa test.

Results: The preoperative evaluation placed 43 third molars in the "low" difficulty group, and in 36 of these (84%) there was agreement between the preoperative and the postoperative assessment of a "simple" operation. Seventy-two third molars were considered preoperatively as being in the "medium" difficulty group, and in 57 of these (79%) there was agreement between the preoperative and the postoperative assessments of "moderately simple". Thirty-four third molars were considered preoperatively as being in the "difficult" group, and in 25 of these (74%) there was agreement between the preoperative and postoperative assessments of "difficult". Fifty-one third molars were considered preoperatively as being in the "plus" group and in 42 of these cases (82%) there was agreement between the preoperative assessment of "very difficult" and the postoperative assessment of "extremely difficult". The level of agreement was 0.73, indicating a substantial concordance according to the guidelines of Landis and Kock.

Conclusion: An adequate risk assessment and evaluation of surgical difficulty are essential in the preparation