ANNALES
UNIVERSITATIS MARIAE CURIE-SKŁODOWSKA
LUBLIN – POLONIA
VOL. LXII, N 1, 14 SECTIO D 2007

Periodontology Department, Dental Surgery Department, Medical University of Lublin

BARBARA OWCZAREK, EWA GAŁKOWSKA,
MAŁGORZATA KIERNICKA, JOANNA WYSOKIŃSKA-MISZCZUK

Gangrenous tooth roots as a result of epulis gigantocellularis – description of a case

Gingivae are frequent site of the occurrence of oral mucosa hyperplasia, therefore these changes are commonly called epulides. They are tumour-like changes within the area of gingival mucosa, often polypoid, diagnosed and treated by dental surgeons. Views on their etiology are various and not known thoroughly. It is thought that these are the changes originating in periodontium or periosteum, not malignant in character. Factors that may have an influence on the development of epulides are: mechanical traumas, micro-traumas, chronic inflammations as well as hormonal factors (2, 3). In the Polish literature there is no agreement concerning their classification and nomenclature. There are three types of most frequently differentiated epulides: inflammatory epulis (*epulis inflammatoria*), *epulis fibromatosa, epulis gigantocellularis* (4, 8).

On the 17th May 2006 a patient K.D. aged 54 reported at the Department of Periodontology at the Medical University of Lublin because of exophytic change of the alveolar process of the mandible in the region of the 43–46 teeth. The patient reported that 4 months before a bulge appeared, which was gradually growing. It was not painful and bled easily. The clinical study stated vivid red pediculate tumour with uneven, plicated surface sized 2.5 cm x 2 cm (Fig. 1) on the alveolar process of the mandible on its right side in the projection of the 43–46 teeth. Gangrenous roots of the 44 and 45 teeth were within the tumour. Panoramic X-ray did not state bone osteolysis of the apex of the mandibular alveolar process, though in the projection of the 44 and 45 tooth roots there were visible periapical changes characterized as periapical granulomas (Fig. 2). The patient was qualified for surgical procedure after prior basic tests: peripheral blood cell count, bleeding time and clotting time. Peri-operative management included supragingival and subgingival scaling as well as oral hygiene training. The use of toothpaste and chlorhexidine mouthwash was also recommended. Patient's written consent was obtained for the offered surgical procedure. The tumour removal within the margin of healthy tissues and the extraction of 44, 45 tooth roots were performed in perineural and infiltration anesthesia using 2% lignocaine with noradrenaline (Fig. 3). Tooth sockets were scrapped and alveoplasty and coagulation of the post-operative wound margins were performed. The wound was sutured and adhesive Solcoseryl-dental paste dressing was put on (Fig. 4). The patient was recommended to rinse her throat with 0.2% Corsodyl twice a day for 1 min as well as cold compresses and soft, mild diet. Tissue material was sent for histopathological examination. Post-operative healing revealed no complications, sutures were removed 7 days after the operation. The result of histopathological examination was: *epulis gigantocellularis*.

Fig. 1. Epulis – clinical picture

Fig. 2. Panoramic x-ray – proliferative change in the region of the 44 and 45 tooth roots

Fig. 3. State after the extraction of the 44 and 45 tooth roots and the resection of the change

Fig. 4. Surgical wound dressing

DISCUSSION

Histopathological picture of *epulis gigantocellularis* reveals numerous polynuclear giant cells occurring in aggregations surrounded by the bands of fibrous connective tissue which contains numerous blood vessels. Infiltrations of plasmatic cells and lymphocytes (6, 7), are stated focally, especially in ulcerated tumours. The treatment of epulides should rely on complete surgical removal of a change within the margin of healthy tissues. Potential methods of treatment that are quoted include the acute removal of a change together with scrapping of the osseous base, resection with the use of surgical laser, the removal of a change by means of electrosurgery (4). The scope of surgery depends on the clinical, radiological and histopathological picture. The management in case of *epulides gigantocellularis* which are characterized by the presence of giant cells being the type of osteoclasts, damaging the margin of alveolar process should be particularly radical; the removal of the tumour together with the peduncle, periosteum, superficial layer of bones and surrounding teeth (4, 6, 8). The method of surgical treatment of epulides has the largest number of supporters; differences most frequently refer to the profoundness of the surgery, especially tooth extraction. The majority of authors think that at present *epulides gigantocellularis*, previously considered to be neoplasms, are tissue responses to trauma or irritation (1, 5, 8). The scope of the surgery may be reduced by conscientious interdisciplinary peri-operative management which consists in hygienization, removal of irritating factors (dental deposits, defective fillings, prosthetic restorations) and traumatic nodes, with simultaneous support of pharmacological anti-inflammatory and antiseptic treatment. The effect of this management is the reduction of inflammation, oedema and bleeding which promote surgery precision.

REFERENCES

1. Anneroth G., Siqurdson A.: Hyperplastic lessions of the gingiva and alveolar mucosa. A study of 175 cases. Acta Oncol. Skand., 41, 75, 1983.
2. Bodnar L. et al.: Growth potential of peripheral giant cell granuloma. Oral Surg. Oral Med. Oral Pathol., 83, 548, 1997.
3. Bugała-Musiatowicz B. et al.: Badania ekspresji receptorów estrogenowych i progesteronowych w nadziąślakach olbrzymiokomórkowych". Czas. Stomat., LVI, 7, 475, 2003.

4. Grzesiak-Janas G. et al.: Porównanie klasycznego leczenia chirurgicznego z nożem laserowym nadziąślaków olbrzymiokomórkowych. Por. Stom., 1, 20, 2005.
5. Hattowska H.: Nowotwory jamy ustnej. San Media, Warszawa 1994.
6. Kruś S.: Patomorfologia dla stomatologów. Med. Tour Press Int., Warszawa 1997.
7. Soames J. V., Southam J. C.: Patologia jamy Ustnej. San Medica, 97, Warszawa 1996.
8. Zielińska-Kazimierska B.: Guzy zwane nadziąślakamiw przeglądzie piśmiennictwa. Czas. Stomat., LIII, 1, 52, 2000.

SUMMARY

The paper presented the case of *epulis gigantocellularis* with traumatic and inflammatory etiology as well as the way of its treatment. The patient had oral cavity assanation and anti-inflammatory treatment introduced and subsequently surgical procedure was performed.

Korzenie zębów zgorzelinowych przyczyną nadziąślaka olbrzymiokomórkowego – opis przypadku

W pracy przedstawiono przypadek nadziąślaka olbrzymiokomórkowego o etiologii urazowej i zapalnej oraz sposób jego leczenia. U pacjentki przeprowadzono sanację jamy ustnej i wdrożono leczenie przeciwzapalne, a następnie wykonano zabieg chirurgiczny.