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*Observations on epulises based on clinical material
with a focus on histopathological diagnosis*

Epulis is a benign tumour of the gingiva, typical of the oral cavity, which is a lesion on the borderline between hypertrophic and neoplastic lesions. Traumatic and inflammatory factors constitute favourable conditions for epulises development (4). Epulises occur individually or can form multiple tumours (1). If they are located in the dentulous zones of the oral cavity, they leave the interdental papilla, however, in the edentulous zone they remain in close contact with the alveolus after the extracted tooth. However, they occur in dentulous zones more frequently. Their size varies from 2.5 to 3 cm, in most cases they are pediculate, and the colour depends on the tissue structure. Depending on histopathological image and clinical picture there are several types of epulises: *epulis fibromatosa*, *epulis granulomatosa*, *epulis gigantocellularis*.

Epulis fibromatosa is a lesion with hard, fibrous texture, light pink colour, it occurs mainly individually and is prone to considerable hyperplasia. It can develop on the basis of connective tissue proliferation or be the consequence of untreated *epulis granulomatosa*. Its structure is dominated by mature connective tissue and a network of collagen fibres with a small addition of blood vessels. Some authors further classify *epulis fibromatosa* into calcifying fibroblastic granuloma and ossifying fibrous epulis (5, 7).

Epulis granulomatosa is a benign tumour with soft texture, easily bleeding due to its largely vascularized granulomatous tissue, which constitutes its stroma. Even a small injury can cause massive bleeding. *Epulis granulomatosa* is red and its surface can be smooth or lobuliform. Entirely different type of *epulis granulomatosa* occurs in pregnant women in the second and third trimester of pregnancy, and is hormonally conditioned. In most cases it disappears after delivery.

Epulis gigantocellularis is also called reparative giant granuloma. Its pathogenesis is associated with past injury or recurring micro-injuries, chronic bacterial infections and intratissue extravasation. The lesion is blue or dark red colour, it is normally not pediculate. It is characterized by fast growth, uneven, crater-like surface, soft texture, liability to numerous bleedings and forming ulcerations on the tumour surface. Epulis giant cells cause the occurrence of osteolytic defects in the bone matrix on the alveolar process. It appears on the x-ray image as irregular contour. The lesions occurring in the area of the alveolar process of the lower or upper jaw also include *epulis gravidarius*. It is a hormone-dependent tumour, growing very fast, red colour, easily bleeding, which regresses after delivery. The tumours called *epulis congenitum* are rarely found. They occur on the alveolar process in infants. These lesions can regress naturally or require surgical treatment.

In addition to the types of epulis mentioned above there can be found a largely vascularized nodule called *granuloma teleangiectaticum* in the oral mucosa. It is a benign lesion, pediculate, characterized by fast growth, bright red colour, easily bleeding, with the tendency to recur in the case of incomplete excision of the lesion. Tumours occurring on the gingival line are known as vascular epulis (2, 6).

Epulises are lesions which do not give pain, however, their presence causes difficulties in chewing and eating food.

MATERIAL AND METHODS

35 patients were examined and treated in the years 2002–2006. In 54% of the cases the lesions were located in the upper jaw, and in 46% in the lower jaw. The table shows the relationship between epulis location, sex and age of the examined patients. The study revealed that the largest number of epulises occurred in the upper jaw – 18 cases in female patients out of 20 female patients in the whole group examined (Tab. 1).

Table 1. The table shows the relationship between epulis location, sex and age of the examined patients

Age	Men	Women	Location	
			upper jaw	lower jaw
<20	1	1	0	2
21–40	2	7	6	2
41–50	2	6	4	4
51–60	5	2	5	1
>60	5	4	3	6
Total	15	20	18	15

That mainly concerned the alveolar process in the area of the teeth 12–22 and 32–42. The epulises growth time observed by the patients varied from several weeks to several years. 91% of the epulises were the formations not exceeding 3 cm in diameter, the other ones were bigger. As for their colour and texture, in the prevailing number of cases (over 70%) the lesions were bright red, slightly bleeding when touched, not causing pain. In the 35 cases there were found only 6 epulises with blue-red colour. These were the lesions located near the teeth, the other were on the alveolar process. The treatment of these lesions consisted in surgical intervention, and the obtained material was examined histopathologically. The table presents the number of patients with a particular histopathological diagnosis and the patients' sex. The study shows that the largest number of patients diagnosed with *epulis fibrosa* was in the examined population of women (6 people). The highest number of female patients was also diagnosed with *epulis inflamatoria* (11 cases), but the largest group diagnosed with *epulis gigantocellularis* was made up of men – 4 cases (Tab. 2). The largest number of patients diagnosed with epulises was observed in the age range above 60 years (10 patients). In this age group there was a prevalence of patients diagnosed with *epulis fibrosa* (5 people). There were 3 patients diagnosed with *epulis inflamatoria*, and 2 with *epulis gigantocellularis* (Tab. 3).

Extraction of the teeth located by the lesions was sometimes necessary. In several cases the teeth from the lesions area were saved, and their prognoses were favourable. Epulises were mainly found in older people, generally healthy, without any systemic diseases. The patients with chronic hypertensive disease, heart diseases, inflammatory conditions in the respiratory tract or chronic

peptic ulcer disease constituted a small percentage. Epulis treatment consisted in complete surgical excision at the base of the tumour, and excision of the superficial bone layer of the alveolar process in the case of its resorption. The operation was conducted with local anesthesia with Lignocaine or Marcaine. The lesion and the margin of healthy tissues were excised with a scalpel, then the seat was milled and suturing was done.

Table 2. The number of patients with a particular histopathological diagnosis, including sex

Diagnosis		Diagnosis		Diagnosis	
<i>E. fibrosa</i>		<i>E. inflam.</i>		<i>E. gigantocell.</i>	
F	M	F	M	F	M
6	5	11	6	3	4

Table 3. The relationship between histopathological diagnosis and patient's age

Age	Histopathological Diagnosis		
	<i>E. fibrosa</i>	<i>E. inflam.</i>	<i>E. gigantocell.</i>
<20	1	0	1
21–40	1	7	1
41–50	1	4	1
51–60	2	4	1
>60	5	3	2
Total	10	18	7

DISCUSSION

Thirty-five patients underwent surgical treatment. The largest group was constituted by women aged 50–60 years. Those data do not correspond with the conclusions of other authors (3). The teeth bordering on epulises were extracted only in the cases where the periodontium space was occupied by growing tumour or the teeth could not be qualified for conservative treatment. Such conservative surgical treatments are very important in the case of young people, when the lesions are located in the anterior section of the lower or upper jaw. The observations of other authors emphasize the advantages of conservative surgical treatment which saves the teeth bordering on the epulis. The cause of epulis development are mechanical-traumatic factors, including iatrogenic ones such as tooth extractions or inadequate prosthetic restoration and appliances (2, 4). Because of the frequent occurrence of epulises in women, high estrogen concentration is considered to be a factor favourable to their formation and influencing their further growth.

CONCLUSIONS

1. In the collected material epulises occurred more frequently in women aged above 60 years.
2. In most cases the lesions were located on the alveolar process, in the anterior section of the dentulous upper jaw.
3. The observations imply that there is a decrease in epulis incidence in the population in comparison to previous years.

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SUMMARY

The study presents the characteristics of 35 cases of epulises on the basis of the clinical material gathered in the years 2002–2006. Special attention was paid to the choice of a treatment method, epidemiology of occurrence of those pathological lesions and also histopathological diagnosis.

**Spostrzeżenia na temat nadziąsłaków na podstawie własnego materiału klinicznego
ze zwróceniem uwagi na rozpoznanie histopatologiczne**

Przedstawiono charakterystykę 35 przypadków nadziąsłaków na podstawie własnego materiału klinicznego, zebranego w latach 2002–2006. Główną uwagę zwrócono na wybór metody leczenia oraz epidemiologię występowania tych zmian patologicznych, a także rozpoznanie histopatologiczne.