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Cervicofacial actinomycosis – an issue still present

Actinomycosis is a specific, primary, chronic inflammation of the soft tissue and of the bone. It concerns people between 20 and 50 years of age, mainly men. *Actinomyces israeli* is the principal cause of human actinomycosis, but sometimes *Actinomyces bovis*, *Actinomyces israeli* or *Actinomyces odontolyticus* may cause the disease (1, 5). These microorganisms were believed to be fungi but now they are actually classified as bacteria. Actinomycosis is classified anatomically according to the location of the lesions, and one can recognize cervicofacial, abdominal and pulmonary forms (3).

Cervicofacial actinomycosis is the most common form of this disease and of special interest to the dentist. *Actinomycetaceae* are all normal components of the oral flora.They may be cultured from carious teeth, tonsillar area, dental calculus, periodontal packet, infectious root canals, and periapical granuloma. Cervicofacial actinomycosis infection most often involves the mandibular bone and rarely the alveolar crest and oral mucosa, but pathomechanism of actinomycosis of bone is unknown. Trauma seems to play an importatnt role in some cases of initiating this infection. Thus the extraction of teeth (especially third molars), other dental or oral surgical procedures, nonsurgical trauma, injuries, foreign body, replantation of the tooth, or abrasion of the oral mucosa may precede actinomycosis. Actinomycotic lesions are usually described as either single or multiple abscesses or indurated masses with hard fibrous walls and soft central loculations.The skin overlying the abscess is purplish red and indurated (9, 10, 13).The infection of the soft tissues may extend to involve the mandible or, less commonly, the maxilla. The usual locations of cervicofacial actinomycosis are the ramus of the mandible, angle of the jaw, or the submandibular region. Less frequent sites are the mouth (gingiva, palate or tongue). Actinomycotic inflammation often leads to osteomyelitis of the mandible (11, 12).

Because of the general use of broad spectrum antibiotics, sometimes abusing and correctly endodontic treatment of the teeth (extirpation methods), the character and clinical picture of actinomycosis have changed. Now, cervicofacial actinomycosis is observed in the form of small inflammatory reaction with formation of the small periodontal abscess. Sometimes swelling, noncharacteristic pain and slight, or lack of, purulent secretion are observed. Evident destruction of the jaw bones are often associated with these symptoms. Such destructive lesions within bone may occur or localize at the apex of one or more teeth and simulate a pulp-related infection (2).

The diagnosis of actinomycosis is established on the basis of the clinical examination confirmed by bacteriological and histopathological tests. The results of both examinations are not always uniform. False negative results of bacteriological examinations are more frequently caused by the wrong procedure of taking and transporting specimens for the studies. Specimens should be obtained from percutaneous fistula drainage, aspirates, or biopsy material. Contamination by the normal microflora of the mouth must be avoided. Negative findings of histopathological tests result from antibiotic

treatment before biopsies have been taken. This leads to decomposition of *Actinomycetaceae*, which, as a result, can resemble gram-positive cocci (8). Radiological examination: P-A and lateral X-ray of the mandible, pantomograms and ultrasonography are also helpful in the diagnosis of the actinomycosis.They often reveal irregular bone lesions with tiny multiple sequestrae.

The specific inflammation like actinomycosis presents therapeutic problems for the clinician (4,7). Both diagnostics and management of actinomycosis are difficult and long-lasting. Within the general medication the sulfonamides and various antibiotics are used (Streptomycin, Penicillin, Erythromycin, Cephalosporin, Tetracycline, Clindamycin) of which Penicillin turns out the most effective one. The usual recommendation is for a high initial dosage – 2 to 20 million units per day parenterally for 2-4 weeks, followed by oral penicillin for 2 to 6 months. The local treatment comprises idoine, hialuronidase, polocaine, antibiotics, which are administered through in ionophoresis or injections around the focus. The duration of treatment depends on the patient's general condition and on the time of remission of pathological changes (6). The basic methods of surgical treatment of cervicofacial actinomycosis consist of abscess incision, sequestrectomy and enucleation of bone lesions (3). However, the treatment of this disease is very difficult and has not been uniformly successful, because the presence of *Actinomyces* in the granulation tissue often is not connnected with the occurrence of actinomycosis. Also the development of this disease is associated with hypoimmunity of the patient (2). One should not forget about the sanation of the oral cavity, which is necessary for complete recovery.

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SUMMARY

On the basis of the literature the authors present the etiopathogenesis, entry of the infection and the course of cervicofacial actinomycosis and they describe treatment possibility of patients with actinomycosis.They also concentrate on the present, atypical clinical picture of the disease, especially in the initial period.They find the sanation of the oral cavity is necessary for a complete recovery.

Promienica twarzowo-szyjna – problem wciąż aktualny

Autorzy na podstawie piśmiennictwa przedstawiają etiopatogenezę, wrota zakażeń oraz przebieg promienicy twarzowo-szyjnej i opisują możliwości lecznicze pacjentów z *actinomycosis*. Zwracają również uwagę na obecny nietypowy obraz kliniczny choroby, zwłaszcza w początkowym okresie, a także na konieczność sanacji jamy ustnej, stanowiącej warunek całkowitego wyleczenia.