

## CONNECTION BETWEEN SOME JOINT DISEASES AND FOCI OF ODONTOGENIC ORIGIN

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### ABSTRACT

The author focuses on the connection between chronic foci of odontogenic origin and their role in the occurrence of non-specific infecto-allergic arthritis, for the time being of uncertain etiology.

It is pointed out that a proper radical treatment of stomatogenic foci is required, so that recurrence of arthritic diseases can be avoided.

**Key words:** stomatogenic foci, diseases of the joints

Focal problems are among the topical and controversial issues of medicine.

The role of stomatogenic foci in elucidating the etiology and pathogenesis of a number of diseases becomes more and more clarified, so their sanitation occupies a specific place in the overall management.

Foci create an area where various diseases may develop. They are usually a prerequisite not only for the occurrence of various symptoms, but also for the manifestation of a given disease or for exerting an effect on different stages of the disease process.

The issue of which focally determined or focally maintained diseases are most frequently connected with foci of dental origin remains still unsolved. Some authors (2, 5) point out in the first place rheumatic diseases, nephroses and nephritic diseases – 2%, endocarditis – 11%, whereas others (2) draw the attention to the particularly frequent connection with ocular diseases – 46% (1).

The specialized publications at our disposal offer scarce reports on the connection between some diseases of the joints (rheumatoid arthritis, infectoallergic polyarthrititis) and odontogenic foci. Various observations and experience from everyday practice show that some of the complaints in the limbs of patients suffering from such diseases are directly connected with a dental focus and are apparently influenced by the condition of the latter. In spite of that, these types of arthritis remain least elucidated regarding their etiology and pathogenesis. Authors like Altman assume allergy to be the cause of the focal infection, to which the body gets sensitized. Other authors (3, 4) as-

sume that the disturbances in the function of the endocrine, pituitary and adrenal glands play an equally important role.

### AIM

The aim of the study was to find a statistically proved dependence between the type of stomatogenic focus and the type of joint disease, as well as to describe some cases of practical interest.

### Materials and methods

The study included 30 patients that sought our medical help, 15 of them with rheumatoid polyarthrititis and 10 with infectoallergic arthritis. There were a few patients with vague complaints in the joints, whose condition also improved after the sanitation of the active foci found.

Active odontogenic foci were found by applying general and local reactivity tests. Side by side with this, epicutaneous tests were made (after Jadassohn and Bloch) to prove intolerance to some dental materials (zinc oxide, eugenol, thymol, amalgam, white metals, phosphate cements). Most of the patients included in our study had had the disease for a few months, and only 2 of them had had it for 2 years. As a rule, the patients had resorted to dental aid at a stage of their disease when therapy had failed to yield good results.

### RESULTS AND DISCUSSION

To prove that there is definite connection between joint diseases and odontogenic foci, we shall present two cases of infectoallergic arthritis, which greatly improved following sanitation of the active stomatogenic foci.

The patients with the above-mentioned joint disease complained of pains in the joints of the hands, mild swelling without erythema or fever, and movement rigidity that gradually disappeared with exercise. The complaints of pains in the joints of the legs were fewer. The patients had experienced periods of exacerbation of the arthritic symptoms resulting from various causes – most frequently due to cold or flu. Besides joint pains, some general symptoms were frequently observed: weakness, headache, insomnia, profuse sweating, increased vasomotor excitability in the limbs and more rarely subfebrile temperatures.

The clinical course of infectoallergic arthritis resembled other similar diseases, such as infective arthritis of certain etiology; tuberculosis, gonorrhoea, syphilis or the pure type of rheumatism. The lack of exudative and proliferative changes in the joints, deformity and ulnar deviation, negative Vallet-Rose reaction suggested an allergic nature for this disease, bearing in mind the fact that the greater part of the patients had a verified allergy to food, medications, chemicals, washing preparations.

In that sense, the following cases observed by us deserve attention:

The patient K.M., case history No 115, aged 23, has been complaining for the last 5 months of pains in the leg joints and the small hand joints, the greatest pain with concurrent slight swelling being in the thumb distal phalanx. The wrist area of both hands was painful, with retarded movement and impaired flexibility. Movements in the knee joints were unrestricted but painful. The patient herself felt weak, sweated profusely and was irritable. Besides, she felt weakness in the crural area of the lower limbs. She had been consulted with an ENT specialist, surgeon, gynaecologist, but no pathologic changes had been observed in the respective organs. The mild pharyngitis, as reported by the consulting physician, offered no data for presence of a focus. She has not had other focal diseases. Findings from tests were as follows: accelerated Westergren ESR – 24/35; hemoglobin – 15 mg%, leucocytes – 10 000, Weltmann test with a slight shift to the right (7.5 test tube), antistreptolysin titre – 100 E.

Dental status: On examination and radiography it was found that teeth 24, 25 are devitalized, with a diagnosis of diffuse chronic granulomatous periodontitis; diffuse chronic granulomatous periodontitis of 16; diffuse chronic granulomatous periodontitis of 45; at the time of examination she was undergoing root canal treatment of 47, the diagnosis being chronic ulcerous pulpitis; 37 and 38 had large amalgam obturations and high amputation without perceptible periodontal alteration. The alveolar bone was mildly involved by resorptive processes with presence of initial form of periodontosis.

The testing showed decreased capillary resistance in the side where a greater number of active foci were found later.

Electrocutaneous test (ECT) showed marked hyperemia (HE) and hyperalgesia (HA) in the area of 15, 24, 25 и 46. A two-step sanitation was carried out under antibiotic and antihistamine control.

Several days following extraction of 15 and 24, 25, the articular pains decreased, but a slight opalescence in the urine was noted and eczema appeared in the ankle area of the right leg. After consultation with a dermatologist the eczema subsided rapidly. Extraction of 46 followed, again carried out under control, and after that the eczema did not exacerbate; after a fortnight the swelling in the thumb was

even reduced and the pain completely disappeared. The occasional headache disappeared as well.

A new testing was made. ECT in the area of the extracted teeth became negative, only CR (capillary resistance) still showed decreased values. Changes occurred in the knee joints as well. Walking became easier, without fatigue. Some improvement was noted in the paraclinical investigations as well: ESR fell to 7/20; gammaglobulins changed from 32 mg% to 22.9 (almost within normal limits), the Weltmann test was 7 test tube and the antistreptolysin titre - 150 E.

The patient V.S., case history No 121, aged 42 has had persistent insomnia, chronic pharyngitis, intolerance to lanolin, cobalt sulphate and potassium bichromate. In the last two months she has been complaining of pains in the joints of the upper and lower limbs. The patient has had more intense pain and slight swelling in the hands. The patient had retarded movements, impaired flexibility of the fingers, muscle weakness, exhaustion, persistent insomnia, increased irritability. The consultations made showed no pathologic change or evidence of foci, apart from the persistent pharyngitis. The patient had accelerated ESR 18/40, leucocytes – 9000, hemoglobin – 14.5 mg%, fibrinogen – 230 mg%, antistreptolysin titre - below 150 E. Dental examination and radiography showed that 23 and 35 were devitalized, of which only 17 had chronic progressive granulomatous periodontitis. The alveolar bone was involved by vertical resorption, with the clinical picture of pyorrhic type of periodontosis.

The tests showed the following results: the CR was positive and ECT gave marked HE and HA in the area of 17, 13, whereas in the area of 35 – only HE and marked CR. The patient had had 3 teeth extracted, all with a diagnosis of diffuse chronic granulomatous periodontitis, following which she had felt improvement in her general condition, so we extracted 17 under antibiotic protection. As for periodontosis, physical therapy procedures were performed involving alphahimotrypsin. At initiation of procedures the patient's condition worsened – rigidity increased, she experienced greater difficulty in joint movements. Because of that we performed only 5 procedures, combining the treatment with rovamycin. Her condition improved, her movements became less restricted. As for the treatment of tooth 48 with a diagnosis of deep caries, it was obturated with a temporary inlay of zinc oxide-eugenol-thymol. On the following day the patient presented with unbearable pains in the right hand and severe numbness. After removal of the inlay, followed by a respective testing, it was found that she was intolerant to eugenol as well. This fact showed in an indisputable way the allergic nature of her arthritis. Besides this, the consultation with a cardiorheumatologist once again confirmed the diagnosis, which made further treatment exclusively dental. After several days 35 was also extracted. Alteration in the paraclinical indices occurred: Hb 86.5%, leucocytes – 4100, ESR – 15/28, fibrinogen – 230

mg%, antistreptolysin titre - 150 E.

In the days to follow the patient's general condition was improved. Pains in the joints were considerably reduced. Sleep improved. ECT became negative.

These were two of our more illustrative cases, and side by side with these we observed a patient that experienced exacerbation of her old arthritis, as well as new, severe pains in the joints after filling the canals of treated teeth, diagnosed as having diffuse chronic granulomatous periodontitis. Immediately following extraction the pains subsided, and after a few days the patient felt better.

## CONCLUSION

The cases presented require a discussion on the role of chronic odontogenic foci in bringing about non-specific infectoallergic arthritis more specifically, and the remaining arthritic diseases of uncertain etiology in general. In spite of the facts already presented, the interrelation between these diseases and foci of odontogenic origin still remains to be proved.

The above-mentioned facts gave us grounds to make the following conclusions:

1. Stomatogenic foci are a frequent cause of non-specific infectoallergic polyarthritis
2. The dentist should perform proper and radical treatment of stomatogenic foci, so that recurrence of arthritic diseases can be avoided.

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