

SCIENTIFIC WORK REVIEW

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IMPORTANCE OF THERAPY OF ELBOW EPICONDYLITIS USING IONOFORESIS METHOD

Summary

Epicondylitis lateralis cubiti is a common disorder which affects many professions including athletes (tennis players), therefore it was named after them. In our work we used clinical examination and evaluation of the results of ionoforesis treatment by apparatus DIATECH PLUS and TENS T3 1211. Medicaments Dexomen and Lemod were used as well. The medicaments were used 15 to 20 times during 3 to 4 weeks. Results of the treatment were evaluated by clinical examination. The pain disappeared entirely in 21 patients, and in the 7 other patients disappeared three weeks after terminating therapy, adding NSAIL. All patients continued with their previous obligations, and discomforts disappeared. The authors are of opinion that ionoforesis is a good treatment method whereas usual therapy including rest, cold compress and NSAIL do not work. We didn't notice any complications caused by this treatment method.

Key words: *epicondylitis lateralis cubiti, ionoforesis, dexomen, rest, clinical examination.*

1. INTRODUCTION

Lateral epicondylitis, is an enthesopathia, also known as „tennis elbow”. It a starting place of extensor of the hand and fingers. /1/ It affects the most frequently and the most intensely musculus extensor caerpi radialis brevis and extensor digitorum communis /2/, and it is one of the the most common disorder of the so-called outside of joint rheumatoid arthritis. Therefore, relative terminology is not coordinated yet. The Americans call it „Oversus syndrom“, and the Russions „perenapreienie sustavov“. During the last few years it is rightfully classified as a syndrom of enthesopathia. Considering its divided etiology, perhaps the last name is the best one beacuse, at least, refers to the character of anatomical change and its location. The disorder is common and affects 2,5 % of the world population. /2/ The term tennis elbow is often used, though in our country it doesn't affect more than 5 % of these patients. The term tennis elbow was introduced by Moriss in 1883. In our country it mostly affects craftsmen who use tools holding it firmly and repeating the same movements which burdens the same muscles. These craftsmen are bricklayers, carpenters, blacksmiths, machine tool workers, chisel workers, workers with vibrating tools. (3) You could say it's a professional

disorder including many professionals such as typists, surgeons and athletes. It mostly affects persons 40 to 50 years of age with prevalence rate at 10% and incidence at 1% (4). It is more often in tennis player, therefore it is named after them.

Gruchow i Palleier (5) found Epicondylitis in tennis players under the age of 40 rates 24,8%, and 57,4% in tennis players above the age of 40. Etiology is mostly unique. It is a damage of the starting point of previously mentioned muscles, in other words, myotendinous muscle structures caused by repeated simultaneous movements under burden, especially with forced pronation. Starting points of muscles and fascii are extremely strained. The extreme continuous strain decreases blood flow in strained area and nerv endings are overly irritated. It increases the existing strain caused by ischemia which by further burden causes the rupture of fibers and necrosis of endings. This also causes hypervascularisation, in other words, the growth of granulation tissue as a reparative process. If the strain continues, so will the necrosis and repair through inadequate connective tissue.

The authors found while performing a surgery during several treatments found, besides granulative tissue, the mass which was quite thick and gelatinous. (6) It is certain that the substrate progresses from ischemia to necrosis if intense strain continuous. The diagnosis is being made mostly clinically in orthopedic and physiotherapeutic clinics. The first sign is the occasional pain in the beginning, if neglected it becomes permanent and it makes impossible everyday life and work. It's located on the area of epicondylitis humeri lateralis in radiohumeral area, and above the head of the radius. (2) It increases with the hand dorsiflexion under the burden. The pain is easily caused palpatory in the previously mentioned places. In longlasting discomforts there is muscular hypertrophy whose strength is reduced. Experienced doctors do not need additional diagnostics. Sometimes the elbow radiography is being done in order to exclude other changes. Though, sometimes the periost knobs are found on humeri from the starting point of muscles or above epicondylus heterotopic ossification usually in a form of a haze or clearly chronic states. The treatment is principally conservative, it is simple and could be done at home. It consists of resting, cold compress and use of nonsteroidal anti-inflammatory drugs. If the treatment is disciplined and lasts long enough, at least for six weeks, it will bring to healing in almost all cases. In case if these procedures are not effective, the corticosteroids could be applied, two or three injections the most, one per week. The disorder is divided into three phases from the therapeutic point of view:

1. Acute reversible moderate pain which subsides when NSAIL is applied,
2. The pain lasts longer and does not subsides neither when NSAIL is applied nor during the rest. This phase corresponds to profilation of granulative tissue which affects tendon's thickness. The conservative treatment will be successful in this case too provided it lasts long enough,
3. Pathological process affects the entire tendon's thickness, causes the rapture of the muscles' starting point and hypertrophy and hypofunction. The pain during palpation is strong, and with sonograph the rapture could be found or the image of the tendon's intensity could be changed.

Phase 1 consists of rest and ice compresses, three times per 20 minutes. Daily NSAIL. In phase 2, besides previously mentioned therapy, we apply corticosteroids with anaesthetics, locally, no more than three times, once a week. The pain often subsides very soon. However, it is necessary to pay attention not to use the elbow excessively, even though there is no pain. There is no evidence that that corticosteroids improve healing, they just decrease inflammation around necrotic tissue. (6)

Some think that they make anatomic changes worse, spreading the necrosis area, so they could also be the reason of the rapture appearance. In phase 3, surgical therapy is induced because there is no any other way to reconstruct broken continence of the tissue. It shouldn't be done in the period of six months before the disorder appeared. The authors found in small number of surgeries a necrotic tissue in a form of a gelatinous mass in the muscles' starting point. By removing it, the pain subsides, and possible reconstruction of tendons brings to at least temporary healing. (6)

2. RESEARCH MATERIAL

In two years and a half (from March 2013 to August 2015) in Center for Basic Rehabilitation of Healthcare Center in Trebinje, 28 patients with previously mentioned diagnosis were treated. The diagnosis is given by orthopedist and physical therapist, based on anamnesis and clinical signs. Radiography of the elbow is being done only in order to exclude other causes of discomforts (arthrosis, traumas). The average age of the patients was 53, who were from 22 to 70 years old. It is more than it's registered in literature. (4) Most of the patients were employed, and the most common professions included craftsmen, administrative officers who work with computers, typists, but housewives as well. Only three patients were athletes, what is nevertheless more than other authors' information show. (5) There were 15 women and 13 men.

Before the ionoferesis therapy, the rest and cold compresses were included. That lasted for six weeks. If the discomforts continued to appear, depo Medrol was applied to the painful spot. In these cases, discomforts eased very quickly.

After that, we started with ionoferesis therapy with DITECH PLUS electronic desigu and TENS TS 1212.

As to medicaments, we used amp Dexomen and Lemod. Individual therapeutic treatment took one hour. Complete therapy took three to four weeks, five times a week, so in total there were 15 to 20 therapies.

We didn't notice any complications. All patients were back to work after this therapy, in case they were employed. Seven patients had some more discomforts for three weeks, but they disappeared with NSAIL therapy.

3. COMMENT

Treatment of epicondylitis is polymorph. It makes it difficult to estimate the values of individual treatments.

The average age of our patients is older than in other published authors. (4,5). The total age of our patients was probably influenced by female administrative officers who work with computers, so as the fact that population in total is getting older. We had three housewives and two musicians among patients. Treated athletes completely recovered and continued with training and competitions. Epidemiology of this disorder will probably change along with change of professions of population. Ionoferesis therapy as described above showed to be very successful. It cannot be estimated the importance of resting in this case, which is usually included in this kind of treatment. (8,9).

However, we think that ionoferesis is very significant and effective treatment method, having in mind the fact we didn't have any complications with our patients.

4. REFERENCES

1. Pećina M., Syndromes of Overstrained Movement System „Globus“ Zagreb 1992.
2. Lesić A. Vukašinović Z. Bumbaširević M. Pathologies Of The Elbow. Special orthopedia Institute of Orthopaedic Disorders Banjica Beograd.
3. Bojanić J., Pećina M., Bilić R. et all. Epicondylitis humeri. Causes and Possible Treatments. KMV 1988; 36 _,6o 81.
4. Aleksander E. Prevalence and incidence and remission rates of some Ommon rheumatic disases syndromes.Scand Rheumatolog 1074; 34 145_53.
5. Gruchow H. W. Pelletier BS. An epidemiology Tennis Ellbow. Am.J. Sports Med. 1979;7:234_8.
6. Vuković M. Ždrale S. Entesopathy. Svetigora 8_17:2001.
7. Jojić J. Clinical Rheumatology. Školska knjiga Zagreb 1982.
8. Burse G., Washer DG. Apsorption of the Dexamethasone. Am J.Sports med. 2000; 36: 753_759.
9. Basurt F., Oscan A., Algun C. Comparison of phosphoresis and ontoporesis of Naproxen in the treatement of lateral epicondylitis .Clin Rheum. 2003, 17: 98-100.