Knee Contracture as a Sequel of Chronic Borreliosis

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Background: Lyme disease is a three phase multifunctional infection. Phase II and II are also called „great imitator”, taking in consideration that its symptoms are alike other disease symptoms, and therefore, it is difficult to do a right diagnosis, and treat and cure as fibromyalgia, chronic fatigue syndrome, rheumatoid arthritis, multiple sclerosis, Parkinson disease, Lupus Erythematoses. Official medicine does not recognize chronic recidive stream of the disease and therefore therapy for Borreliosis is strictly determined from 2 up to 6 weeks (WHO, CDC, textbooks, guideline, UpToData). Objective: The aim of this case report is to draw attention to more and more frequent recognition of chronic Borreliosis in our midst and to urge better cooperation between doctors of various expertise on every level.

Case presentation: In this paper we present a case with knee contracture on both knees of a 46 years old man, caused by Borreliosis Burgdorferi. Disease diagnosis was set 9 months after the very start of the symptoms including implemented therapy during a 4 weeks period with Cephtriaxon. But, the disease has relapsed, with such a wavy flow, and, patient remained permanently disabled. Because of aforementioned ailments, the patient was treated by rheumatologist as seronegative polyarthritis with the exclusion of Rheumatoid Arthritis. Patient walked harder, having „legs fatigue”, with knee and ankle aches with a feeling that his knees are „starting to consecrate”. He was very insecure during walking, couldn't feel leg stretches, and therefore he would lift his leg poorly, stuck to the mat and periodically fell. Conclusion: Postponed therapy and short providing of antibiotics increasing the percentage of relapsing that might cause permanent disability. Therapy revision is necessary on global level, not only for acute form, but also for chronic Borreliosis as well.

Keywords: Chronic Borreliosis, sequels, knee contracture.

1. BACKGROUND
The Lyme disease is a three phase multifunctional infection. Phase II and II are also called „great imitator”, taking in consideration that its symptoms are alike other disease symptoms, and therefore, it is difficult to do a right diagnosis, and treat and cure as fibromyalgia, chronic fatigue syndrome, rheumatoid arthritis, multiple sclerosis, Parkinson disease, Lupus Erythematoses. Official medicine does not recognize chronic recidive stream of the disease and therefore therapy for Borreliosis is strictly determined from 2 up to 6 weeks (WHO, CDC, textbooks, guideline, UpToData). Non-cured chronic Borreliosis progress affecting organ by organ, decreasing life quality and often end with disability.

2. OBJECTIVE
The aim of this article was to draw attention to more and more frequent recognition of chronic Borreliosis in our midst and to urge better cooperation between doctors of various expertise on every level existing.

3. CASE PRESENTATION
Patient Dž.P, 46 years old from Sarajevo, Designer of Informatics, married, father of one, got sick in the middle of 2013. Occasional pain on large joints on elbow, knee, shoulders, as well as in lower spine parts was the very start, including cervical spine parts after the initial period. Throes was alternate, lasting a couple of hours, up to several days, followed by pale swellings, weakness and fever of 38-39 C along with chills. There was muscle pain throughout my whole body. Shortly after the first symptoms there were urination problems, often urinated, especially during the night period waking up several times. Overnight sleep was disrupted with muscle and joint aches. Occasionally dizziness emerged, blurred vision, like vision through fog, followed by narrowing the field view, despite normal findings of the ophthalmologist. Because of aforementioned ailments, the patient was treated by rheumatologist as seronegative polyarthritis with the exclusion of Rheumatoid Arthritis. Patient walked harder, having „legs fatigue”, with knee and ankle aches with a feeling that his knees are „starting to consecrate”. He was very insecure during walking, couldn't feel leg stretches, and therefore he would lift his leg poorly, stuck to the mat and periodically fell.

Orthopedists and physio were consulted but etiologically not resolved. Despite physio treatment the condition was worsening. Patient started to use crutches, otherwise he couldn't walk at all. He was depressed and occasionally anxious. Both knee contracture starts to...
amplify and after the nine months period, body temperature rises to 39-40 on a daily basis. On 17.03.2014, a patient was hospitalized at the Clinic of Infectious Disease in Sarajevo under the diagnoses: Febris ex causa ignota protrachens.

Earlier history: Tonsil Atomized during childhood, had PTSD from 1996-2006, treated from Chronic obstructive Diseases (COD)

There is no food and drugs allergy nor pollen.

Family history; His father died from lung cancer, mother has hypertension. Nobody else in the extended family has any similar disease.

Epidemiological history: Living in a house with a garden together with his wife and son. There is no animals in the house. In 2008, he was bitten by a tick on his belly skin. Few days later, ringlike redness was reported with no symptoms, lasting for about 3-4 weeks, never treated, and passed by itself. There was a doubt set by the Clinic of Infectious Disease, and later on was serologically confirmed Morbus Lyme. Treated for about 4 weeks with Cephtriaxon 2gr i.v. After the treatment he recovered: body temperature was normal, pain in joints decreased, wake up and urinating at night was decreased to one per night, as well as decreasing vision interference. He was transferred to Physio Clinic for a contracture rehabilitation for a period of five weeks. After the physio treatment he felt much better in general, left knee contracture decreased significantly, but right knee contracture remained as it was before the treatment with minor improvement. He was on sick leave for a period of a year and a half, where he was treated by a psychiatrist because of depression as a medical condition. After sick leave, he started to work from home, but after a month he was forced to stop working due to worsening of a general condition, with joints and muscles aches in legs, more right-sided and because of the depression. Within the end of 2015 and early 2016, his skin started to itch through whole body with „sores” on the thigh skin, occasionally on shin and upper arm. Usually, hardening appeared, like after a mosquito bite, leaking a little fluency, and sores appeared which slowly overgrown. From time to time he was very slack, apathetic, depressed, followed by itchiness and annealing on palms and soles. Pains in legs increased as well as right knee contracture. Periodically he will fall off, especially if he stands up without crutches because of the impossibility for a leg stretch, with a wrong estimation how much he will have to lift or stretch. The leg was dragged „like a rag”. In September 2016, H.zoster appeared from lower spine parts through the whole thigh and was treated in a daily care hospital. During and after the H.zoster treatment, symptoms worsened with amplified right knee contracture. In Nov 2016 he was treated at the Clinic of Psychiatry because of „borderline personality disorder”. He takes Exmal, Dipresan, Q-pin, Haldol, Trasem after he leaves the hospital. With these drugs, he felt better, ailments decreased, sleeping overnight improved, but not for a long time.

Due to the condition deterioration, he was contracted for consultation in the Infectologist dispensary on 09.01.2017. Clinical condition was: no temperature, good body shape, pale, moderately hypoinamic, depressed, with neglected appearance, half bent, mobile with the help of two crutches because of visible contracture on both knees, more expressed on right knee, with an expression of chronically ill patient. When manually pressured, the patient feels pains on knee, shoulder and elbow joints as well as on shin, thigh, forearm and upper arm. Skin on the front of the thigh, shin and on foot is with crustocular changes, with the size of pin needle up to bean size, less on the forearm
and fingers. On the right sacral side there were visible scar changes from H.zoster.

Neurological findings: no laterailizacjon, cranial nerves intact. In AG position, rough tremor expressed on arms, legs can shortly keep in position, then fall, because of contracture and fatigue.

Legs strength weakened, RT amplified, while hands and arms strength was in full capacity, RT challenged. Patient can’t stay on his heel nor foot fingers, can’t stand without crutches in Romberg because of right knee contracture.

Previous findings: Discharge letter from Clinic of Infectious Diseases (14.02-17.03.2014), ELISA test made on Lyme Disease IgG-At0406 U7m (positive), IgM-At>0,794 OD (positive), WB not found by technical reasons. All other biochemical analyses are in physiological parameters.

Diagnosis set as Lyme Disease recidivans, Polyarthritis borreliosis.post Th aa II. Contracture art.gen. bill.pp l.dex.borreliose. HOP + Psychiatric diagnoses. Recommended therapy: Ceftriaxon 1x2 gr i.v. with Probiotic, Vitamin C 2x1000mg, B-Complex, Vitamin D 1x10.000, Vitamins A and E and Omega 3 as well within the recommendation to exclude any sugar in food and maximum diet decrease of carbohydrates, alcohol and coffee forbidden, avoiding of any physical and mental efforts, severe cold or heat and direct exposure to the sun as well. Monitored on 10 days followed by 15 days. After an 8 weeks period of time within i.v. The therapy patient felt better but it was a subjective feeling; no skin itches (very rarely only on legs/toes), urination reduced, better sleep overnight, waking up only once per night, reduced pain in cervical spine, occasionally “vision fog”. Space disorientation, as well as joint and muscle aches remain with less intensity and rarely reported.

Clinical status was with no changes, with the exception of hands tremor in AG position and with less expressed depression. EMNG on lower and upper extremities was recommended as well as to control serology on ELISA and WB (Immunoblot). In the next four months (early April up to the end of July), the patient was with no therapy, based only on symptoms, vitamin therapy within psychiatric therapy. Within the start of very hot weather conditions, problems returned: joints aches, skin itches, problems with urination, vision, peripheral nerves and CNS. Despite taking antidepressants, mental condition deteriorated: Isolating himself, with no communication with his family, two anxiety attacks and aggression with no cause. Therefore, he was hospitalized at the Clinic of Psychiatry. After the discharge from the Clinic, he was on a control at the Infectologist on 27.07.2017. The treatment was extremely depressed, briefly answering questions, breaking out skin with atypical reddish rash, partially excoriated by scratching, expressed muscle fasciculation alternately with one shoulder, then another, lost it very quickly and there is no tremor in AG position. RT on upper extremities weakened, more on right hand, and slightly enhanced in lower extremities. Everything else with no changes. Condition expressed this time was understood as worsening after the resanitated recidive of Chronic Borreliosis and repeated therapy with Ceftriaxone 1 x 2 gr i.v. during a four weeks period, followed by Clarithromycin for a period of three weeks, permanently, then intermittens, with 10 days of therapy with i5 day pause. On Dec.2017 WB test was still positive IgM-Ar, four years after the tick bite: IgM +9, IgG +35. Starting from 22.05.2018 the patient was on intermittent therapy with Doxycycline with probiotic, Vit.C, B and, Magnesium granules as well as Controloc because of stomach problems. During the last five months of 2017 and first half of 2018, problems withdrew very slowly. Diseases went through some wavy period of improvements and deterioration. Symptoms reduced at the end of therapy period and pausing period as well, but, amplified in the first three or four days after the start of using therapy (Herxheimer!). Slowest withdrawal of the problems was muscle and joint aches and feeling of „legs tiredness”. From Aug.2018 problems reduced even more. Pains in joints and muscles on the right side (knee, ankle, hip, lower spine and wrist) are with less intensity, within a short period of duration and bearable. Rarely takes any analgesics. Twice a year spent on spa rehabilitation for a 5 weeks period that fit him well. Left leg contracture is minimal, but expressed more on a right leg. Urinating with no glowing pain and very rarely woke up for an overnight urination, no more than once per night. There is no back of the neck pain, there is no „fog vision” and rarely vertigo appears. There are still cramps and fasciculation, especially with no consumption of Magnesium, but rarely than before. In the last four months of 2018 start to work on a full time job, where before that he was working remotely and part time. During 2019, he is with a minimum of joint problems, more rarely cramps and fasciculation. From mid 2020, he takes only vitamins and ethereal oils, and reduced doses of antidepressants. He moves within orthosis and with only one crutch. At home he uses a walking stick, working online. And, he said that on a scale from 1-100, his life improved by 70%.

4. DISCUSSION

There was a proof that spirochetes Borrelia.burgdorferi can last isolated in a fibroblast escaping any immune host response. Also, it was confirmed that they are resistant (cystic, round shaped) with no impact of a standard therapy and in 10-20% of those cases confirmed, Borreliae cause persistent and/or recurrent infection especially in patients with intermittent problems (7,8,9,10). Relapses occur at 9-30% of not or adequately treated (8,9,10).

There were late diagnoses set at our patient and also a late start of therapy (after 9 months), lasting a short period of time, because it was prescribed by valid protocols (WHO, ECD and UpToData), no matter that af-
fected multiple organs. A recidive and relapse was treated with i.v. therapy combined with intermittent oral therapy, with an addition of ethereal oils of wild oregano and tea tree oil. Recovery is unquestioned, because the patient went back on full time work duties after 4,5 years leave.

5. CONCLUSION

Postponed therapy and short providing of antibiotics increasing the percentage of relapsing that might cause permanent disability. Therapy revision is necessary on global level, not only for acute form, but also for chronic Borreliosis as well.

• Deferred therapy and short therapy period in first and second stage of Borreliosis can impose patients into persistent infection, increasing the percentage of recidive and often can cause disabilities.

• There is a necessity of a revision of Borreliosis therapy, not only on acute form, but as well as on chronic one, on a global level, because valid therapy is not matching the reality, which can be disastrous for patients.

• These patients have to be treated in Infectologist-Psychiatrist collaboration because of the treatment of depression/anxiety syndrome that are developing unquestionably.

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