VIII ANNUAL SCIENTIFIC CONFERENCE ON LYME BORRELIOSIS

Call For Abstracts

If you would like to present data, in poster form, please send your abstract/s to the LDF by November 30, 1994. Selected abstracts will be published in the Compendium. Abstracts should be typed within the abstract box outline. No additional pages are allowed. Please use capitol letters for the title, underline main author and include the address where research was done & the timeframe. A conference committee member will contact you regarding more information, as needed. Selections will be made by the end of February, 1995.

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- ☐ Microbiology
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- ☐ Other (list) _____

PERSISTENCE OF BORRELIAL DNA AND ANTIBODIES IN LYME ARTHRITIS ORIGINALLY DIAGNOSED AS JUVENILE RHEUMATOID ARTHRITIS.

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In a follow-up study, 164 patients with juvenile rheumatoid arthritis (JRA) were examined 10 to 20 years after initial diagnosis. Some of the patients subsequently had been symptomless, some had severe sequelae due to their disease.

B. burgdorferi chromosomal DNA (encoding flagellar protein) was detected by polymerase chain reaction (PCR) in 13 (7.9%) of 164 sera. All sera were tested for antibodies against whole sonicated *B. burgdorferi* by ELISA (WS-ELISA). Among the 13 PCR-positive patients, 8 (61.5%) had positive antibody levels (IgM or IgG ≥2SD above mean of normal population). The sera positive with WS-ELISA were further analyzed by three additional ELISA tests, and IgG Western blotting. Antibodies against flagellin of *B.burgdorferi* (FL-ELISA) were borderline or positive in 6 of 8, against 39 kD antigen in 2, and against 83 kD antigen in 0 of 8 patients. By Western blotting only one of the patients positive by PCR showed clearly reactive result, 3 equivocal and 3 negative results (not done in one WS-ELISA-positive and 5 WS-ELISA-negative patients).

Among the remaining 151 patients, 40 (26.5%) had positive antibody levels by WS-ELISA. All these 40 sera were further analyzed by FL-ELISA, 39kD-ELISA, 83kD-ELISA and IgG Western blotting. Positive or borderline results were obtained in 28 by FL-ELISA, in 8 by 39kD-ELISA and in 3 by 83kD-ELISA. By Western blotting 7 were regarded as clearly reactive and 7 equivalent (not done in 3 patients).

Antibody positive (by WS-ELISA) patients represent 29.3% of the entire material. By Western blotting antibodies against OspA was detected in only 1 patient, whereas 21 (43.8%) of 48 patients had antibodies against OspB and 6 patients against OspC. The most frequent (22 patients) band among the antibody positive patients was that against 18 kD protein, which also is known to be specific for *B. burgdorferi*.

Active disease at the time of follow-up visit was found in 5 of the 13 PCR-positive cases. Three of the PCR positive cases had developed ankylosis of joint(s). Initial symptoms of arthritis were oligoarticular in 10 and polyarticular in 3 of 13 patients. One patient had multisystem manifestations. Data from the remaining 151 patients is currently under evaluation.

Conclusion: Our findings indicate that 20 years ago borrelia arthritis has been misdiagnosed as JRA in Finland. It is evident that borreliosis still is a problem in the differential diagnostics of JRA. PCR provided a strong evidence for a very long persistence of *B. burgdorferi* in some patients. This might indicate that the arthritic symptoms in these patients are not caused solely by immunological mechanisms.

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- ☒ Other (list) Case Presentation

A CASE OF LYME DISEASE MISDIAGNOSED AS RHEUMATOID ARTHRITIS AND SUCCESSFULLY TREATED WITH LONG TERM AZITHROMYCIN

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A 59 year old white male presented with a ten year history of migratory joint pain, which had started in the feet and progressed to the lumbar and cervical spines. Eventually the knees and shoulders became involved.

Despite negative testing for RA, three different Rheumatologists recommended treatment for RA. After two years of non-response to NSAIDS, the patient was placed on hydroxychloroquine sulfate (PLAQUENIL), with little response. He remained on Plaquenil and Naprosyn for an additional eight years.

When first evaluated in August 1992, the patient gave a strong history of exposure to ticks and lived in an endemic area of Lyme Disease (Princeton, N.J.). He was unable to close his hands without pain and awoke frequently during the night due to hand, neck and shoulder pain. Swelling of his fingers (IP and MCP joints) was the only objective finding on physical exam. He had limited ROM of his cervical spine and shoulders.

Lab studies showed a slightly elevated titer of B. B. antibodies, an equivocal IGG Western Blot, and a negative IGM Western Blot. Sed rate, RA factor, C-reactive protein and ANA were all negative.

The patient was started on Azithromycin (ZITHROMAX) 250 mg. daily. When evaluated three weeks later, the patient was sleeping through the night without pain. His morning stiffness was gone and, overall, his pain had diminished by 50 %. Antibiotics were continued for another month and then decreased to one capsule three times a week (Monday, Wednesday and Friday). This dose was maintained for three more months.

The patient was symptom free on March 24, 1993 and remains so today.

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