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To
IDSA Lyme Disease Review Panel
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The Deutsche Borreliose Gesellschaft e.V. (German Society of Lyme-Borreliosis) has objections to the IDSA Guidelines 2006. The objections relate to the late lyme disease (LD), chronic lyme borreliosis and the so-called post lyme syndrome.

- LD is always associated with a generalized dissemination throughout the entire organism, in other words with the involvement of the CNS, too. The antibiotic treatment should therefore be carried out with antibiotics that penetrate the CNS, irrespective of the various manifestations of the illness (arthritis, neuroborreliosis, neuropathy, ACA, carditis, encephalopathy). The antibiotics recommended by the IDSA, namely doxycycline, amoxicillin and cefuroxime, do not penetrate the CNS, unlike minocycline and gemifloxacin; the i.v. applied cephalosporins of third generation obviously induce high concentration in CSF because high dosage is applicable referred to the minimal inhibitory concentration (MIC).
- Seronegativity is a frequent occurrence with LD and does not rule out a chronic persistent lyme borreliosis (1-18).

- Contrary to the opinion of the IDSA, the following antibiotics and methods of treatment have proven to be advantageous: carbapenems, ketolides and gemifloxacin (19), pulsed-dosing (20).
- The differential diagnosis MS / LNB based on serological investigations in CSF and serum is not possible in 25% of the cases (9-11, 21).
- Peripheral neuropathy is not rare but occurs in over 20% of the cases with LD (22-25).
- So-called two-tier testing is not suitable for a serological diagnosis of LB. This is particularly true of the late phase too for the following reasons:
 - o The sensitivity of the screening tests is 50%-90%
 - o The test methods available on the market are not standardized with respect to their analytical value
 - o The sensitivity of the western blot is around 10% higher than that of the screening test
 - o This different sensitivity thus means that there is a risk that the screening test will be negative whereas the western blot shows positive
 - o Neither the screening test nor the western blot guarantee the proof of a borreliosis infection, i.e. there is a problem of seronegativity (based on the screening test and western blot) even though the illness persists and has been confirmed by identification of pathogenic agent.
- Objections to the proposed definition of post-lyme-disease-syndrome of IDSA:
 - o Antibiotic treatment according to standard (guidelines IDSA) do not guarantee an elimination of the LB
 - o If subjective complaints do not lead to a significant disturbance of the quality of life, the assumption of an illness (PLS) is not necessary
- The disease situation described by Steere et al (26) as minor signs and symptoms and by Bujak (27) as a post-lyme syndrome represented serious discomforts for the affected patients that were comparable with decompensated cardiac insufficiency, degenerative joint diseases,

pronounced diabetes mellitus or a condition after a myocardial infarction according to the accounts of Klempner et al (2).

- The following facts suggest the existence of a chronic lyme borreliosis due to vital *Borrelia*:
 - Persistent symptoms of an LB with identification despite intensive antibiotic treatment (28-46)
 - Members of the Deutsche Borreliose Gesellschaft have documented 150 such cases (ISBN 978-3-640-19378-3, submitted to Future Drugs, Expert Review of antiinfective therapy)
 - *Borrelia* could still be identified in the skin even after multiple antibiotic treatment with ceftriaxone, doxycycline and cefotaxime (47-49)
 - There is an extensive body of literature on the existence of a chronic lyme borreliosis (45, 50-55)
 - The pathogen could be cultured in every stage of LB (28-44), even after intensive antibiotic treatment (20, 41, 56-60)
 - The resistance of Bb to numerous antibiotics has been proven (61)
 - Numerous publications deal with chronic LB and the problems of its antibiotic treatment (20, 48-49, 62-66)
 - The antibiotic treatment of EM displays a therapeutic failure rate of 10% (15, 41, 45, 47, 67-74)
 - There is a high therapeutic failure rate for the antibiotic treatment of lyme borreliosis in its late phase (52, 54-56, 65, 75-77)
- The so called adequate antibiotic therapy (according to IDSA guidelines) is subject to reservations:
 - Because of possible resistance of Bb to different antibiotics (included those recommended by IDSA guidelines) change to another antibiotic may be indicated (cf 61)
 - (Erythromycine is not suitable for treatment of LB (26, 83-85))

- Duration of treatment depends on organic manifestations, degree and course of disease (therapeutic effect) (cf 2, 20, 25-26, 41, 45-47, 49, 51, 53-54, 56, 60-66, 71-73, 75, 86-94)

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