Reviewer’s report

Title: The NeBoP score - a Clinical Prediction Test for Evaluation of Children with Lyme Neuroborreliosis in Europe

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Reviewer: Hasan Salih Zeki Salih Aksu

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The article aims to build a scoring system based on some clinical and laboratory data for rapid and early lyme neuroborreliosis diagnosis, since getting serologic blood results takes time in BOS.

Data gathered from 177 patients pre-diagnosed of lyme neuroborreliosis between 2000-2005 were firstly analyzed. Those who get a final diagnosis of LNB and those who are diagnosed with another disease are considered as two groups. Following 5 criteria are defined as differing between those two groups when they are tested by logistic regression analysis:

1) acute facial nerve palsy,
2) fever,
3) fatigue,
4) erythema migrans and/or lymphocytoma,
5) pleocytosis in CSF (with total cell count # 5 x 10^6/L with # 90 % mononuclear cells).

Authors transform these 5 criteria to a scoring system which they call NEBoP. According to this scoring system the highest sensitivity and specificity value is determined as 3 and above. Authors test the validity of this value on 197 children who are pre-diagnosed with LNB between 2010-2013. ROC analysis results and sensitivity and specificity results of the scoring system were found quite high. ROC curve also has a high significance level; 0,95 (p=0,0001).

The article is properly studied and well structured. The scoring system developed in the study facilitates decision-making to start treatment and thus has a potential of daily use in European countries where the disease is endemic.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.