Author’s response to reviews

Title: Neutrophil CD64 index in cerebrospinal fluid as a marker of bacterial ventriculitis in children with external ventricular drainage

Authors:

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Cover letter for revision of manuscript: Neutrophil CD64 index in cerebrospinal fluid as a marker of bacterial ventriculitis in children with external ventricular drainage (BPED-D-17-00653R2)

All changes are in red.

Technical Comments:

1. In abstract section of the manuscript the style of heading and keywords were changed according to BMC Pediatrics style.

2. Tables were placed in the main manuscript file after the figure legends and references (and removed from additional files).

3. Figure legends were included in the main manuscript. The Legend for different lines is generated automatically when figure is designed and can not be removed (it would be also impossible to put this in the text).

Editor comments:

a.) We were not able to differentiate infection from colonization in all patients, but the study was designed so that only patients with signs of infection were included. This lowers the possibility
of contamination to minimum. Besides, in this vulnerable population (premature infants) it can be dangerous to claim that for example coagulase negative staphylococci are not pathogens causing illness, which is explained in the discussion. Even more sophisticated methods – PCR are limited in this differentiation which again is also explained in the discussion.

The sentence was added: Although only children with clinical signs of infection were included, it is still possible that some cases of colonisation were recognized as infection.

b.) The sentence was added in the conclusion: but because of very challenging diagnosis of ventriculitis in this population, it should be viewed with caution.

c.) We provide CSF glucose levels, but not blood glucose levels.

The sentence was added: Besides, blood glucose levels were missing in our children; therefore comparison between CSF and blood glucose levels was not possible.

Reviewer reports:

1. We changed: in an adult population
2. We added to the text: (50 µl of CSF)
3. We added to the text: The cut-off values at which the greatest sum of sensitivity and specificity was obtained were determined by the statistical program.
4. P-values were rounded to the nearest hundredths.
5. The actual cut-off values were added in the text.
6. Table 1 - % were added.
7. Table 1 – the list of pathogens was moved to the text.
8. We were not able to differentiate infection from colonization in all patients, but the study was designed so that only patients with signs of infection were included. This lowers the possibility of contamination to minimum. Besides, in this vulnerable population (premature infants) it can be dangerous to claim that for example coagulase negative staphylococci are not pathogens causing illness, which is explained in the discussion. Even more sophisticated methods – PCR are limited in this differentiation which again is also explained in the discussion.

The sentence was added: Although only children with clinical signs of infection were included, it is still possible that some cases of colonisation were recognized as infection.