Author’s response to reviews

Title: Role of Calcifying Nanoparticles in the Development of Testicular Microlithiasis in Vivo

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Author’s response to reviews:

Dear editor and reviewers,

Thank you for the comments on our work. Our manuscript has been revised by a native English speaker. Now we have carefully prepared a revised manuscript to address all the questions raised by the reviewers and editors. We hope that our replies and new revision are satisfactory to you and the expert referees, and that the manuscript is now acceptable for publication in BMC Urology.

Please let me know if you have any questions.

Best regards.

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Reviewer 2

Comments

In Fig 2 to identify the leucocyte population, specific IHC should be used.

Answers:

Thank you for your helpful suggestion. The present study was only a descriptive rather than mechanistic study. Specific IHC used to identify the leucocyte population between group B and group C may lead to better understanding of NP character and the possible roles of NPs in TM pathogenesis. Therefore, further investigations using IHC may be involved in our further work. We have added discussion concerning this comment in the revised manuscript (page 12, line 16-19).

Comments

TM patients is a radiological finding. How well does the model recapitulate this (i.e. need US scans of the rat's testes)

Answers:

Testicular microlithiasis is a rare urological disease of unknown ethiology characterized by a huge number of tiny calcifications or calcospherites. It is generally asymptomatic, representing an occasional finding at pathologic examinations. US shows a variable number of tiny bright echoes without acoustic shadow scattered throughout testicular parenchyma. In our previous study design, we have hoped to detect TM by using US scans. Unfortunately, we did not find a suitable ultrasonic probe for rats. Moreover, for the medical ethic sake, we removed this content from the present study. Nevertheless, promising results have been obtained using other methods in this study.
Reviewer 3

Comments

What is rationale of injecting E Coli in rat? It is not discussed in the text.

Answers:

Thank you for your suggestive opinion. In our early experimental design, we intended to explore the formation mechanism of testicular microlithiasis by NPs, and thus chose E. coli as a control to uncover the differences in histopathological alterations. Unfortunately, we failed to observe any significant differences in terms of histological features. Further investigations on the differences of the leucocyte population by means of immunohistochemistry (IHC) between them may better define the character of NB and their possible mechanistic role in TM pathogenesis. According to your suggestion, we have added relevant discussion in the revised manuscript (page 12, line 12-17).