

PEER-REVIEW REPORT

Name of journal: *World Journal of Hepatology*

Manuscript NO: 69584

Title: Effects and safety of natriuretic peptides as treatment of cirrhotic ascites: A systematic review and meta-analysis

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02942856

Position: Peer Reviewer

Academic degree: BM BCh

Professional title: Associate Professor, Attending Doctor

Reviewer's Country/Territory: Taiwan

Author's Country/Territory: Denmark

Manuscript submission date: 2021-07-05

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-08-13 04:13

Reviewer performed review: 2021-08-21 07:57

Review time: 8 Days and 3 Hours

Scientific quality	☐ Grade A: Excellent ☐ Grade B: Very good ☒ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Language quality	☐ Grade A: Priority publishing ☒ Grade B: Minor language polishing ☐ Grade C: A great deal of language polishing ☐ Grade D: Rejection
Conclusion	☐ Accept (High priority) ☐ Accept (General priority) ☒ Minor revision ☐ Major revision ☐ Rejection
Re-review	☒ Yes ☐ No

Peer-reviewer statements	Peer-Review: ☒ Anonymous ☐ Onymous
	Conflicts-of-Interest: ☐ Yes ☒ No

SPECIFIC COMMENTS TO AUTHORS

WJH-69548 Gantzel RH et al. Effects and safety of natriuretic peptides as treatment of cirrhotic ascites: A systematic review and meta-analysis In this review article, Gantzel et al performed a meta-analysis which examined the effects and safety of applying natriuretic peptides to cirrhosis patients with ascites. They found that sodium excretion increased in response to continuous ANP infusion and was more pronounced when infusion rates of >30 ng/kg/min were applied. Moreover, natriuresis was significantly higher in those with mild/moderate ascites compared with moderate/severe and refractory ascites. The study design, statistical analyses and discussion are appropriate. However, there are some issues to be clarified: Major comments 1. The authors identified that first, plasma aldosterone concentration and renin activity were significantly elevated at baseline in study subgroups achieving a negative sodium balance in response to an ANP administration compared with treatment non-responders ($p < 0.01$). The second finding is that subgroups with mild/moderate ascites have the most pronounced ANP natriuretic response than that with refractory ascites. It has been known that patients with refractory ascites have a more prominent activation of renin-angiotensin-aldosterone axis and higher aldosterone levels. This makes the two findings contradictory. Please provide the readers more information by summarizing the discussions on this point from the analysed studies or discussing the underlying mechanism. 2. The serum sodium and potassium levels can be affected by ANP and affect the cirrhotic patients with ascites significantly. Did the analysed studies collect the sodium and potassium levels in response to ANP administration?