



ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Cardiology
ESPS manuscript NO: 19779
Title: Therapeutic modification of arterial stiffness: An update and comprehensive review
Reviewer's code: 00503207
Reviewer's country: Hungary
Science editor: Xue-Mei Gong
Date sent for review: 2015-05-21 14:56
Date reviewed: 2015-05-22 20:51

Table with 4 columns: CLASSIFICATION, LANGUAGE EVALUATION, SCIENTIFIC MISCONDUCT, CONCLUSION. It contains checkboxes for various review criteria like 'Grade A: Excellent', 'Duplicate publication', 'Plagiarism', etc.

COMMENTS TO AUTHORS

In their manuscript Wu et al. review the possibilities of therapeutic modification of arterial stiffening. The subject is very exciting and in most of the fields authors managed to reach good quality. However, in some parts it has weaknesses. 1. However chronic kidney disease is on the list of table 1., but the active role of bone metabolism regulators in the development of arterial stiffening in CKD, a very exciting pathophysiological process, would be worth to be summarized in a few sentences1. 2. The chapter "Measurement of arterial stiffness" discusses only two methodologies, which is far from the reality. At least shortly other methods should also be mentioned, see table 3 of2. 3. In chapter "Pharmacological therapy" authors should mention the phosphate binder sevelamer, which was found in ESRD patients to improve arterial stiffening3. Alagebrium, a AGE crosslink breaker should also be mentioned, as it is a promising agent, but clinical trials were not conducted because of financial problems of the developing company. In animal studies it improved arterial stiffness, which effect was missing in a small group of older individuals4, 5. From this chapter I also miss the mention of any ongoing trials or future directions. 4. Other grammatical remarks: Page 5, line 17:



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"pathophysiology" Page 6, line 6: "resistance muscular arteries" On page 6, line 13 a reference should be cited about the changes of reflection point. Figure 2 legends: "chemical stress" Figure 2: There is a "u" character on an arrow. In the legend of table 1 and throughout the paper: "lifestyle". Reference 72: 56. is probably unnecessary References: [1] Nemcsik, J, Kiss, I and Tisler, A, Arterial stiffness, vascular calcification and bone metabolism in chronic kidney disease, *World journal of nephrology*, 2012;1:25-34. [2] Boutouyrie, P, Fliser, D, Goldsmith, D, et al., Assessment of arterial stiffness for clinical and epidemiological studies: methodological considerations for validation and entry into the European Renal and Cardiovascular Medicine registry, *Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association*, 2014;29:232-239. [3] Othmane Tel, H, Bakonyi, G, Egresits, J, et al., Effect of sevelamer on aortic pulse wave velocity in patients on hemodialysis: a prospective observational study, *Hemodialysis international. International Symposium on Home Hemodialysis*, 2007;11 Suppl 3:S13-21. [4] Oudegeest-Sander, MH, Olde Rikkert, MG, Smits, P, et al., The effect of an advanced glycation end-product crosslink breaker and exercise training on vascular function in older individuals: a randomized factorial design trial, *Experimental gerontology*, 2013;48:1509-1517. [5] Stepan, J, Tran, H, Benjo, AM, et al., Alagebrium in combination with exercise ameliorates age-associated ventricular and vascular stiffness, *Experimental gerontology*, 2012;47:565-572.



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Name of journal: World Journal of Cardiology

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

COMMENTS TO AUTHORS

I have reviewed the manuscript by Ching-Fen Wu and colleagues with interest. I found that this is basically well-written. I have following comments. 1. In the Introduction section, many descriptions regarding arterial stiffness should be supported by citations. 2. In the Measurement of arterial stiffness section, authors failed to discuss regarding Cardio-Ankle Vascular index (CAVI). Please add discussion regarding CAVI and whether pharmacological or non-pharmacological intervention can modify CAVI or not. 3. In the Measurement of arterial stiffness section, please discuss merit and demerit of several types of arterial stiffness parameters and consider to add Table comparing these arterial stiffness parameters including CAVI. 4. In Table 1, citations should be added for each factor.