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## ESPS PEER REVIEW REPORT

**Name of journal:** World Journal of Clinical Cases

**ESPS manuscript NO:** 12998

**Title:** Asthma and metabolic syndrome: current knowledge and future perspectives

**Reviewer code:** 00608206

**Science editor:** Xue-Mei Gong

**Date sent for review:** 2014-08-01 22:13

**Date reviewed:** 2014-10-30 15:24

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> [ Y] Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> Existing	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> Existing	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

### COMMENTS TO AUTHORS

**GENERAL COMMENTS:** Review article on the relationship between asthma and metabolic syndrome. Topic of interest serviced properly. References are acceptably date: > 60% (56/74) of the last 5 years. The structure of the article and its general outline is correct (Abstract, Keywords, Core tip, Introduction, Epidemiological link between asthma and metabolic syndrome, Pathophysiological mechanisms, Current and future developments and Conclusive remarks). The relationship between asthma and obesity are properly reviewed. In this sense the other components of the metabolic syndrome (dyslipidemia, insulin resistance, hypertension and central obesity) are also evaluated. Seems that the asthma-obesity relationship is best explained by inflammatory processes related to all the factors associated with metabolic syndrome that not only with obesity. There are no ethical problems.

**SPECIFIC COMMENTS:** **TITLE:** Specific, it adequately contains the primary endpoint. (Words: 9). **ABSTRACT:** Define and explain the concepts well properly structure review article. **Key words:** Correct **INTRODUCTION:** Clear and correct introduction. Well structured. The **DIFFERENT SECTIONS** (Abstract, Keywords, Core tip, Introduction, Epidemiological link between asthma and metabolic syndrome, Pathophysiological mechanisms, Current and future developments and Conclusive remarks) are clear and well structured. The figure is simple but summarizes the review. The review is presented in a clear and correct form. **REFERENCES:** The references are up to date (76% of the last 5 years) in adequate numbers (74 references). However, it strikes me that there are a number of references, with high relevance according to different databases,



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which have not been collected. 1.- Schumann, R. Association of metabolic syndrome and surgical factors with pulmonary adverse events, and longitudinal mortality in bariatric surgery? 2.- Agrawal, Anurag. Body mass index is not a stronger predictor than the metabolic syndrome for future asthma in women. 3.- Singh, Suchita. Insulin and the lung: connecting asthma and metabolic syndrome. 4.- Garmendia, Jenny V. Metabolic syndrome and asthma. 5.- Linderholm, Angela L. Novel Therapeutic Strategies for Adult Obese Asthmatics. 6.- Agrawal, Anurag. Obesity, Metabolic Syndrome, and Airway Disease: A Bioenergetic Problem? 7.- Assad, Tour. Reply: body mass index is a stronger predictor than the metabolic syndrome for future asthma in women. 8.- Perez, Miriam K. Metabolic Asthma: Is There a Link Between Obesity, Diabetes, and Asthma? MINOR COMMENTS Orthographic revision: It is not necessary



**ESPS PEER REVIEW REPORT**

**Name of journal:** World Journal of Clinical Cases

**ESPS manuscript NO:** 12998

**Title:** Asthma and metabolic syndrome: current knowledge and future perspectives

**Reviewer code:** 02445885

**Science editor:** Xue-Mei Gong

**Date sent for review:** 2014-08-01 22:13

**Date reviewed:** 2014-10-06 03:54

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> Existing	<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"/> No records	<input type="checkbox"/> Rejection
<input checked="" type="checkbox"/> Grade D: Fair		BPG Search:	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Existing	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

**COMMENTS TO AUTHORS**

Although the data described in the manuscript are generally well written, with good readability, many important and/or interesting aspects related to the complex pathophysiological mechanisms involved in asthma and metabolic syndrome are not presented or discussed in detail, and some not up-dated, impairing the novelty and innovative nature of the article. Adipose derived hormones, such as adipisin, adiponectin, leptin and resistin, represent molecular links between asthma and inflammation. Adipokines may have a role in the pathogenesis of allergic inflammation, and may exert pro-inflammatory activities in asthma. Adiponectin, an adipocyte-derived cytokine, is known to have anti-inflammatory effects with reduced concentrations in obese subjects and recent findings raised the intriguing possibility that adiponectin play a role in allergic inflammation. Adiponectin receptors are involved in metabolic syndrome, and AdipoR1 and AdipoR2 are also expressed in human eosinophils involved in allergic inflammation [Yamamoto R, Ueki S, Moritoki Y, Kobayashi Y, Oyamada H, Konno Y, Tamaki M, Itoga M, Takeda M, Ito W, Chihara J. Adiponectin attenuates human eosinophil adhesion and chemotaxis: implications in allergic inflammation. *J Asthma*. 2013 Oct;50(8):828-35. doi: 10.3109/02770903.2013.816725. Epub 2013 Jul 17. PubMed PMID: 23777560; Yamauchi T, Iwabu M, Okada-Iwabu M, Kadowaki T. Adiponectin receptors: a review of their structure, function and how they work. *Best Pract Res Clin Endocrinol Metab*. 2014 Jan;28(1):15-23. doi: 10.1016/j.beem.2013.09.003. Epub 2013 Sep 15. Review. PubMed PMID: 24417942]. Adipokine adiponectin is a potential protector to human bronchial epithelial cell for regulating proliferation,



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wound repair and apoptosis [Zhu XL, Qin XQ, Xiang Y, Tan YR, Qu XP, Liu HJ]. Adipokine adiponectin is a potential protector to human bronchial epithelial cell for regulating proliferation, wound repair and apoptosis: comparison with leptin and resistin. *Peptides*. 2013 Feb;40:34-41. doi: 10.1016/j.peptides.2012.11.017. Epub 2012 Dec 5. PubMed PMID: 23220445]. High resistin levels predict favourable anti-inflammatory effect of inhaled glucocorticoids suggesting that resistin may be a marker of steroid-sensitive phenotype in asthma. High leptin levels are associated with a more severe disease suggesting that the link between leptin and asthma is not restricted to obesity [Leivo-Korpela S, Lehtimäki L, Vuolteenaho K, Nieminen R, Kankaanranta H, Saarelainen S, Moilanen E. Adipokine resistin predicts anti-inflammatory effect of glucocorticoids in asthma. *J Inflamm (Lond)*. 2011 May 26;8:12. doi: 10.1186/1476-9255-8-12. PubMed PMID: 21615949; PubMed Central PMCID: PMC3117675]. Moreover, asthma in obese adults is associated with impaired macrophage/monocyte efferocytosis. Impairment of this anti-inflammatory process is associated with altered monocyte/macrophage programming, reduced glucocorticoid responsiveness, and systemic oxidative stress [Fernandez-Boyanapalli R, Goleva E, Kolakowski C, Min E, Day B, Leung DY, Riches DW, Bratton DL, Sutherland ER. Obesity impairs apoptotic cell clearance in asthma. *J Allergy Clin Immunol*. 2013 Apr;131(4):1041-7, 1047.e1-3. doi: 10.1016/j.jaci.2012.09.028. Epub 2012 Nov 13. PubMed PMID: 23154082]. Important data related to peroxisome proliferator-activated receptors (PPARs) as ligand-activated transcription factors belonging to the nuclear receptor family at the crossroads between lipid metabolism and inflammation, are not presented in the manuscript [Chinetti G, Fruchart JC, Staels B. Peroxisome proliferator-activated receptors (PPAR) and inflammation: from basic science to clinical applications. *Int J Obes Relat Metab Disord*. 2003 Dec;27 Suppl 3:S41-5. Review. PubMed PMID: 14704743; Chinetti G, Fruchart JC, Staels B. Peroxisome proliferator-activated receptors (PPARs): nuclear receptors at the crossroads between lipid metabolism and inflammation. *Inflamm Res*. 2000 Oct;49(10):497-505. Review. PubM



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## ESPS PEER REVIEW REPORT

**Name of journal:** World Journal of Clinical Cases

**ESPS manuscript NO:** 12998

**Title:** Asthma and metabolic syndrome: current knowledge and future perspectives

**Reviewer code:** 00608153

**Science editor:** Xue-Mei Gong

**Date sent for review:** 2014-08-01 22:13

**Date reviewed:** 2014-10-09 11:37

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	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"/> Existing	<input checked="" 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"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> Existing	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

### COMMENTS TO AUTHORS

It's a well-written article that reviews the relationship between metabolic syndrome and asthma. It's a relatively novel research area. I just wonder the role of oxidative stress as the potential mechanisms in metabolic syndrome and asthma. Perhaps rennin-angiotensin-system also plays an important role in the pathophysiology.