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315-321 Lockhart Road,
Wan Chai, Hong Kong, China

ESPS Peer-review Report

Name of Journal: World Journal of Anesthesiology

Ms: 3428

Title: Suspected Cerebral Arterial Gas Embolism (CAGE) During a Laparoscopic Nissen Fundoplication

Reviewer code: 00190038

Science editor: j.l.wang@wjgnet.com

Date sent for review: 2013-05-02 14:29

Date reviewed: 2013-05-02 23:20

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 type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<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 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"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS

COMMENTS TO AUTHORS:

General Comments This is an interesting case report well written, describing a CAGE during laparoscopic surgery. I insist to condense the Discussion, particularly those parts well known and well described in the text books regarding gas embolism and to give some space to differences in the physical properties of the gases with potential to produce gas embolism. Abstract Delete the last sentence. Such a statement can be included in the Discussion with the relevant reference Introduction -I would replace "risk" with the word "complication". -CO2 venous embolism has a prevalence of 15/100,000 cases per year: Please clarify where this prevalence applies, e.g. in USA, in all over the world, where? Case Report -"The patient was brought.....": Name the standard noninvasive variables measured. Name the doses of anesthetics used also name the neuromuscular blocker and the dose you used. -The authors state: "Because of her recent delivery...". References must accompany the statement for the postpartum hypercoagulable state four months after delivery as the patient delivered her baby four months earlier. In general hypercoagulation has been shown by thromboelastography 3 weeks after vaginal delivery (Saha et al: Haemostatic changes in the puerperium '6 weeks postpartum' (HIP Study) - implication for maternal thromboembolism. Br J Obst Gynaecol 2009;116:1602-1612). Unless references are added the whole paragraph must be deleted. Discussion -Why all the diagnostic procedures, both simpler and more sophisticated turned out to be negative? -How is explained the negative tests for CO2 embolism and the neurological deficits? -Discussion must be condensed. However the fact that no gas was determined in the



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heart cavities or elsewhere by TEE -You must discuss shortly the physical properties of CO₂, its solubility in the blood (blood/gas λ), compared to other gases like nitrous oxide and nitrogen. CO₂ as more soluble is absorbed much faster in the blood than the nitrogen so in a short period of time is not visible during radiologic investigation. In a couple of sentences discuss the physical properties of nitrogen, nitrous oxide and CO₂ and their significance in producing severe gas embolism, its size, duration and severity. For example if you have a CO₂ pneumothorax during laparoscopic surgery, this will be resolved much faster and with milder clinical symptoms than a pneumothorax with the same quantity of nitrogen. -Cite a reference relevant to the safe values of insufflation pressure.

Argyro Fassoulaki



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ESPS Peer-review Report

Name of Journal: World Journal of Anesthesiology

Ms: 3428

Title: Suspected Cerebral Arterial Gas Embolism (CAGE) During a Laparoscopic Nissen Fundoplication

Reviewer code: 00852498

Science editor: j.l.wang@wjgnet.com

Date sent for review: 2013-05-02 14:29

Date reviewed: 2013-05-14 18:24

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 type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<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 type="checkbox"/> Grade D (Fair)		BPG Search:	<input type="checkbox"/> Minor revision
<input checked="" type="checkbox"/> Grade E (Poor)	<input checked="" type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS

COMMENTS TO AUTHORS:

General comment: The authors report a case of suspected cerebral arterial gas embolism during an unremarkable laparoscopic nissen fundoplication. There are several drawbacks in their clinical case, the main being that nothing can prove the suspected diagnosis and there are no facts that could help sustaining this diagnosis (no intracardiac shunt, uneventful anesthesia). The fact that the authors are forced to use the old concept of "sperrarteries" illustrates the importance of the weaknesses of the case. Moreover the anesthesia protocol was a bit odd to me (use of nitrous oxide during coelioscopic procedure) and does not fit the most recent recommendations. The case could have been interesting if all the current recommendations had been followed and if the gas embolism had been proved. But as it is presented today, I am not convinced by the diagnostic and sincerely doubt the educational potential it could have. Specific comments: Even if the case is understandable, the English needs to be improved to make it more fluent and easier to read. Be more concise! For example, I doubt that precisizing that "a senior neurosurgeon who was coincidentally present in the recovery room at that time" adds a lot to the case, just say that a thorough neurological assessment was made by a senior physician. Be consistent: you give the improvement in upper extremity strength but the initial strength is not precisized... Finally I really think that the etiology of the symptoms has not been proved, so you should be more cautious and at least discuss other etiologies.



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ESPS Peer-review Report

Name of Journal: World Journal of Anesthesiology

Ms: 3428

Title: Suspected Cerebral Arterial Gas Embolism (CAGE) During a Laparoscopic Nissen Fundoplication

Reviewer code: 00506093

Science editor: j.l.wang@wjgnet.com

Date sent for review: 2013-05-02 14:29

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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 type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<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 checked="" type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)		BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS

COMMENTS TO AUTHORS:

The Authors present a case of suspected cerebral arterial gas embolism (CAGE) after an uncomplicated laparoscopic Nissen fundoplication. The potential novelty of this publication is the absence of any transesophageal echocardiographic evidence of intracardiac defect. However the potential role of arteriovenous connections in determining CAGE, even in the absence of intracardiac shunts, has already been argued. Although there was no evidence of a neurologic, pulmonary, cardiac, or hematological etiology, it must be considered that the transesophageal echocardiogram was not performed intraoperatively and no gas was demonstrated in the chambers of the heart. In this case report, CAGE remains a diagnosis of exclusion. Therefore, there is simply little value added, from a scientific point of view, to the current knowledge of the syndrome in terms of diagnosis and management.