



PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Cases*

Manuscript NO: 70679

Title: Suspected cerebrovascular air embolism during endoscopic esophageal varices ligation under sedation with fatal outcome: A case report

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05077771

Position: Peer Reviewer

Academic degree: MSc

Professional title: Surgeon

Reviewer's Country/Territory: Greece

Author's Country/Territory: China

Manuscript submission date: 2021-08-12

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-08-13 16:05

Reviewer performed review: 2021-08-13 18:45

Review time: 2 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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SPECIFIC COMMENTS TO AUTHORS

Very well written manuscript. However the author widens at some points.



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Title: Suspected cerebrovascular air embolism during endoscopic esophageal varices ligation under sedation with fatal outcome: A case report

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02488945

Position: Editorial Board

Academic degree: MD

Professional title: Doctor, Lecturer

Reviewer's Country/Territory: India

Author's Country/Territory: China

Manuscript submission date: 2021-08-12

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-10-18 08:04

Reviewer performed review: 2021-10-19 06:04

Review time: 22 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
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Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No
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SPECIFIC COMMENTS TO AUTHORS

The article “Cerebrovascular air embolism during endoscopic esophageal varix ligation under sedation or anesthesia: a case report” is well written though I suggest the following corrections: (1) For the case report where the procedure was already performed, one should know whether it was sedation or anesthesia. So, remove “or anesthesia” from the title and keep it as “ligation under sedation” (2) During this procedure, multiple varices were ligated and not just one Varix. Also, there is no clear evidence of cerebral air embolism in the entire script, so the cerebral air embolism was suspected. Hence the correct title would be “A case report of suspected cerebrovascular air embolism during endoscopic ligation of esophageal varices under sedation with fatal outcome”. (3) Key words: Paradoxical air embolism should be one word. Sedation/anesthesia should be removed. (4) The case summary is totally inadequate. Background and conclusions can be shortened. In a case report, case summary is extremely important. (5) The dosages of the drugs used for during the procedure indicate that it was sedation and not anesthesia. (6) Use of shorter acting narcotics like Fentanyl or remifentanyl infusion are better suited for procedures in high risk patients who already showed cerebral infarction pre-operatively than sufentanyl. (7) During the procedure: it is easy to monitor end tidal CO₂ which should have been monitored and mentioned in the discussion part. Monitoring of end tidal nitrogen is also very useful, if available, Also, for a patient with an existing cerebral infarct, any kind of cerebral function monitoring would have been useful to detect the level of sedation. While BIS is available for many years and should have been used, newer SedLine monitor is desirable. (8) In the discussion, need to mention the usefulness of TEE, precordial doppler and



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transcranial doppler. Precordial doppler would have been appropriate in this particular case considering the patient had an enlarged heart with tricuspid regurgitation. As appropriately mentioned in the script by the authors that the patient was a high risk for air embolism, transcranial doppler would have been useful. (9) In the discussion, the authors also need to mention the preventive measures of air embolism in high risk patients like the position during the procedure, adequate hydration etc. (10) The discussion should also mention that "Air embolism is iatrogenic and preventable". Lethal volumes of entrained air should be mentioned which is around 200 to 300 ml or 3-5 ml/Kg (Closer the vein of entrainment to the heart, smaller the volume required.) (11) Also mention, why the patient was sent to the ward and not to the high dependency unit (HDU) despite not regaining consciousness. (12) And the most important, how the diagnosis of cerebral air embolism was concluded in this particular case should be mentioned somewhere.