

The comparison of pulse oximetry (SPO2) and blood gas analysis (sao2) to detect hypoxemia in liver cirrhosis

Type: Article

Abstract:

Background: Hepatopulmonary syndrome is characterized by clinical triad of chronic liver disease, hypoxemia and intrapulmonary vascular dilatation. Routine screening of hypoxemia is not performed in all patients with liver cirrhosis. Blood gas analysis is difficult, fairly invasive, expensive and requires special skills; thus, another alternative is required for detection of hypoxemia including pulse oximetry (SpO₂). Objective: To analyze the comparison of SpO₂ pulse oximetry with SaO₂ to detect hypoxemia in patients with liver cirrhosis. Methods: Subjects were grouped into the severity based on Child Pugh score A, B, and C. The subjects were examined for blood gas analysis and pulse oximetry. Data were analyzed using Kruskal Wallis test and Wilcoxon test ($p < 0.05$). Results: The highest cause of liver cirrhosis was hepatitis B of 19 patients (57.6%) and the severity based on Child Pugh B as many as 18 patients (54.5%). The proportion of hypoxemia (<80 mmHg) was 15%. The comparison of SpO₂ and SaO₂ in LC patients showed no significant difference between SPO₂ and SaO₂ (child B, $p = 0.15$ and child C, $p = 0.07$). Conclusion: There was no significant difference between SpO₂ (pulse oximetry) and SaO₂ (Blood Gas Analysis) in liver cirroshis patients.

Author	a) Fajariya R., b) Setiawan P.B., c) Maimunah U., d) Nusi I.A., e) Purbayu H., f) Sugihartono T., g) Kholili U., h) Widodo B., i) Vidyani A., j) Thamrin H., k) Miftahussurur M.
Source	New Armenian Medical Journal
ISSN	18290825
DOI	-
Volume (Issue)	13 (4)
Page	106-110
Year	2019

Keyword:

Cirrhosis of the liver, Pulse oximetry, SaO₂, SpO₂

Please Cite As:

Fajariya, R., Setiawan, P. B., Maimunah, U., Nusi, I. A., Purbayu, H., Sugihartono, T., . . . Miftahussurur, M. (2019). The comparison of pulse oximetry (SPO2) and blood gas analysis (sao2) to detect hypoxemia in liver cirrhosis. *New Armenian Medical Journal*, 13(4), 106-110.

URL:

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077529356&partnerID=40&md5=f81efccb9a72669d380ab878429729a4>
- <https://ysmu.am/website/documentation/files/b5824496.pdf>