

ARTERIAL BLOOD GAS FINDINGS IN CARDIOPULMONARY ARREST PATIENTS

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INTRODUCTION

- The evaluation of arterial blood gases during arrest in cardiopulmonary arrest patients was investigated.
- In these patients, acidosis susceptibility via pH level, increase in lactate level, increase in CO₂ level were detected (1).

INTRODUCTION

- There is a high mortality rate in patients with high levels of acidosis and lactate (2)
- In this study, the relationship between blood gas parameters was investigated in emergency patients who were admitted with cardiopulmonary arrest or who had a cardiac arrest while in the emergency department.

METHODS

- In this retrospective study of patients diagnosed with cardiopulmonary arrest in the emergency department between 2016 and 2017, arterial blood gas values and mortality reasons were investigated.

METHODS:

- Twenty-eight males (56%) and 22 females (44%) were included in the study.
- The mean age of the patients was 74 in males and 67 in females.
- Blood gases were obtained and evaluated via standardized methods
- PH and lactate levels were noted

RESULTS

- The pH in blood gases obtained immediately after starting cardiopulmonary resuscitation and the return of spontaneous circulation ROSC group was significantly higher than in the non-ROSC group (6.96 vs. 6.85; $P = 0.009$).
- $p\text{CO}_2$ and lactate levels in the ROSC group were significantly lower than those in the non-ROSC group (74.0 vs. 89.5 mmHg, $P < 0.009$; 11.6 vs. 13.6 mmol/L, $P = 0.044$, respectively) found.

RESULTS

- There was no statistically significant difference in age between men and women.
- The most common cause of arrest was sepsis (32%).
- In sepsis-linked arrest, the ratio of male to female was equal.
- There was no statistically significant difference between the groups according to arrest etiology ($P = 0,718$).

DISCUSSION

- In a study by Kim YJ and colleagues the relationship between acid-base findings, such as pH, $p\text{CO}_2$, and serum lactate levels, obtained immediately after starting cardiopulmonary resuscitation and the return of spontaneous circulation (ROSC) was evaluated. they note similar results to ours.

DISCUSSION

- In a study by Lee DH and colleagues correlation between initial serum levels of lactate after return of spontaneous circulation and survival and neurological outcomes in patients who underwent therapeutic hypothermia (TH) after cardiac arrest was found.
- High levels of lactate in serum measured within 1h of ROSC are associated with hospital mortality and high CPC scores in cardiac arrest patients treated with TH was found.

CONCLUSION

- Blood gas values SHOULD BE evaluated during cardiopulmonary arrest.
- It is recommended that randomized controlled trials of patients compare arterial blood gas parameters at different stages of arrest.
- High levels of lactate and acidosis suggest bad prognosis

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