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A Case of Prilocain-Induced Methemoglobinemia

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Introduction: Most of the patients consulted for pulmonary problems are patients with respiratory distress and decreased saturation. When evaluating patients, existing diseases, medications and interventions, if any, should be carefully reviewed.

Case Presentation: A 54-year-old male patient was referred to our clinic with cyanosis and low saturation. Low saturation was unresponsive to oxygen therapy. Patient had a rectum carcinoma and nephrolithiasis, cyanosis was developed and oxygen desaturation was decreased down to do 75% during nephrostomy procedure. General condition was good, conscious, oriented and cooperative, blood pressure;140/80 mmHg, pulse rate;89/minute, respiratory rate;18/minute and spO₂: 75%. There was a cyanosis on the lips and fingers, both hemithorax contributed equally to respiration and the heart sounds were normal. The patient had no respiratory symptoms. SpO₂ was 85% with oxygen support. The electrocardiography showed a sinus rhythm. pH;7.39 pO₂;115 sO₂;98 methemoglobin level was 25.8% under oxygen in the blood gas analyses. The patient had been given 60 mg prilocaine for local anesthesia during procedure. In the light of these findings, the patient was diagnosed with acquired methemoglobinemia. The patient was monitored and followed up with oxygen support since the general condition was good and no symptoms were observed. Cyanosis was improved one hour later and follow-up was continued with oxygen support. The methemoglobin level was 8% spO₂: 93% six hours later in the blood gas analyses. No signs of deterioration or arrhythmia was observed during the follow-up. Methemoglobin level was 0.2% and spo₂: 98% in blood gas analyses in the room air at the 24th hour after the diagnosis.

Conclusion: Several cases of methemoglobinemia due to various local anesthetics have been reported in the literature. Although most of these cases were dental procedures, there were cases after bronchoscopy or percutaneous interventions (such as pacemaker implantation). In patients with methemoglobinemia, oxygen therapy as well as methylene blue can be used safely. However, in patients with congenital G6PDH deficiency, ascorbic acid should be given in these patients since methylene blue will deepen methemoglobinemia. Methemoglobinemia due to prilocaine used as local anesthetic is quite rare and is a fatal condition when it is not observed. Methemoglobinemia should first be considered in the case of blue-gray cyanosis which is not responsive to oxygen therapy after the use of local anesthetics, and methylene blue should be considered in treatment in combination with oxygen therapy.

Keywords: Cyanosis, low saturation, adult methemoglobinemia, prilocaine