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Ecchymotic Mask: Not Terrible as It Appears

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A 5-year-old male patient was referred to our pediatric intensive care unit (PICU) after a motor vehicle accident. During the accident, the chest area was squeezed between the front and back seats. Initially, our patient was admitted to a local hospital, approximately 500 km away from our hospital. He was intubated in the hospital's emergency department because of comatose status and respiratory insufficiency (it was stated that his SpO_2 was between 82 and 85% in room air) secondary to lung contusion. Physical examination was performed in a sedated and intubated condition at the PICU admission, and his pupils were bilaterally miotic and reactive to light. Blood pressure and heart rate were in the normal range. Lung auscultation revealed diminished left lung sounds accompanying crackles in comparison with the right side. His SpO_2 level was between 94 and 98% under bag-mask ventilation support. There were widespread petechiae and ecchymosis on the head, face, neck, and upper chest wall regions accompanying perioral cyanosis (Figure 1A). Bilateral eyelids were edematous, and there was bilateral subconjunctival hemorrhage (Figure 1B). Physical examination of the abdomen and other extremities was unremarkable. Creatine kinase was 7083 U/L (0-45 U/L) and procalcitonin was 49 µg/L (0-0.5 µg/L). Complete blood count, serum electrolytes, and other biochemistry values were unremarkable. There was a fracture at the middle of the left clavicula and left lung atelectasis despite the correct position of the endotracheal tube on the chest X-ray. The abdomen ultrasonography was unremarkable. Although his cranial computed tomography (CT) was normal, left side atelectasis and bilateral lung contusion areas were observed on thorax CT.

Intravenous maintenance fluid with 5% dextrose-0.9 NaCl solution (3000 mL/m^2/day), ampicillin-sulbactam, midazolam (0.3 mg/kg/h), and fentanyl (3 µg/kg/h) were started. Invasive mechanical ventilation support was initiated. Rigid bronchoscopy was performed by the pediatric surgery team for atelectasis. Dense purulent secretion in the left main bronchus was aspirated. After the bronchoscopy procedure, left side lung sounds have normalized, and left side lung atelectasis have disappeared on the chest X-ray. He was extubated on the third day of PICU admission, and he was discharged on the tenth day of the hospitalization after completion of the antibiotic treatment. Petechiae, ecchymosis, and bilateral subconjunctival hemorrhage have gradually healed during the follow-up.

Traffic accidents are the most common reason for deaths in the pediatric age group due to external causes in developed countries.[1,2] Lung contusion and pneumothorax are the most emerged clinical conditions secondary to thorax trauma.[2] Traumatic asphyxia is a rare condition that occurs with cervicofacial cyanosis, edema, subconjunctival hemorrhage, and multiple petechial hemorrhages on the face, neck, and upper chest. It occurs secondary to sudden or severe compression of the thorax or upper abdomen, or both.[3-5] Traffic accidents are the most common cause in childhood.[5] The underlying mechanism in this condition and clinical findings is the redirecting of blood from the right atrium to the valveless jugular and innominate veins in the head and neck regions because of the positive pressure caused by crushing injuries in the thorax and upper abdominal region.[5,6] This clinical situation is terminologically called as ecchymotic mask. Severe lung contusion can be frequently seen accompanying with an ecchymotic mask if the underlying cause is crushing thorax injuries as in our

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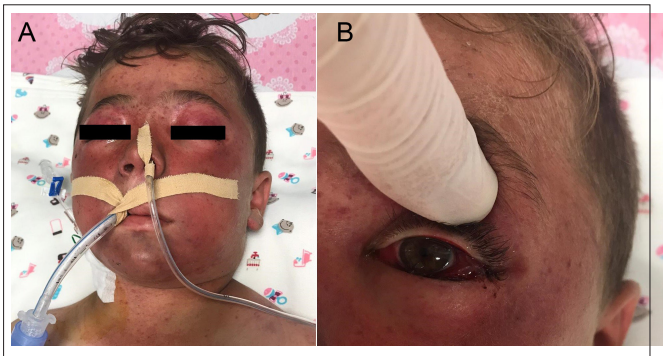

Figure 1. (a) Widespread petechiae and ecchymosis on the head, face, neck, and upper chest wall regions accompanied by perioral cyanosis. (b) Bilateral eyelids edema and subconjunctival hemorrhage.

patient.[6] Although it appears terrible, the outcome is very good with effective basic life support, oxygenation, and timely treatment of accompanying injuries.[3-5]

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