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ABSTRACT

Background: Across the globe, bombing cases have been increasing in number as a method of terrorism. Blast is the most common cause of injury to the victim. On Sunday, May 13, 2018, three bombs exploded in three churches in Surabaya. Reportedly, there were a total of 43 victims with 13 sudden deaths.

Case: Three cases of bombing victims were reported. All cases were burns of more than 50% total body surface area. The first and the third case included inhalation injury which required intubation with ventilator support. In all cases, resuscitation based on Baxter formula and prompt burn debridement were performed. Metal debris were found on the first and third patients. The first patient died 20 hours after the explosion. The second and third patients survived subsequent to treatment in Intensive Care Unit (ICU) for 10 and 29 days, respectively.

Discussion: Trauma due to bomb explosion has four stages of effects: primary (pressure direct effect), secondary (explosion projectiles effect), tertiary (structure collapse and thrown victims), and quaternary (burns, inhalation injury, exacerbation of chronic diseases). The management of burn patients due to high order explosive trauma is fundamentally similar to common burn, which is based on the steps of primary and secondary survey. If thermal trauma of the upper respiratory tract is suspected based on history, early survey and clinical appearance, airway protectionand intubation should be performed immediately. Fluid management is needed in burn cases to maintain tissue perfusion in the early phase of burn shock.

Conclusion: Explosive trauma victims often have a combination of four kinds of trauma (explosive, blunt, penetrating, and thermal). By recognizing the unique features of these injuries, doctors will be able to give better and prompt treatment.

Keyword: bomb explosion trauma; burns; outcome