

## An Unexpected Hand Injury with Pluridigital Fractures Due to Premature Explosion of a Ramadan Cannon

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**Abstract :** Purpose: The use of firecrackers (i.e., Ramadan Cannon) during the month of Ramadan is a traditional way of indicating that the fasting period is over in Muslim countries. Here, we report the rehabilitation of a case of hand injury with pluridigital fractures due to premature explosion of a Ramadan cannon. Materials and Methods: A 48-year old man admitted to the Emergency Department due to left hand injury as a result of a premature explosion of a Ramadan cannon. The patient was immediately taken to operation room because of the multiple fractures, tendon loss, and soft tissue loss in the left hand. Range of motion (ROM) of joints was measured with goniometer, pain and oedema were measured and splinting was performed. Results: Rehabilitation team took over the patient at postoperative 9th week. During the 3 month rehabilitation, range of motion increased, oedema was taken under control, pain was reduced, the colour of the skin turned to the normal tone. According to the visual analog scale (VAS), pain decreased from 9 to 4. Oedema, around the metacarpofalangeal (MCP) joints, decreased from 27,5 cm to 23,5 cm. Total active range of motion of the wrist increased from 5 degrees to 50 degrees. Total active range of motion of supination and pronation increased from 55 degrees to 70 degrees. Discussion: The rehabilitation of multiple hand injury is quite difficult. Different aspects of trauma should be taken into consideration when rehabilitation is planned. Factors such as waiting for the bone union, wound healing, and use of external fixators may delay rehabilitation process. Joint mobilization, massage for reducing oedema and preventing scar tissue, exercise within the range of motion are efficient measures. Poor patient compliance to treatment may lead to poor outcome. First of all, oedema and scar formation must be taken under control. Removing fixators should not be delayed depending on the bone union, and exercise within the range of motion should be started.

**Keywords :** explosion, fracture, hand, injury

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