High Voltage Electrical Burn Injuries of Hand in Children: A Clinico-Aetiological Study and Role of a Doctor in Its Prevention.

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INTRODUCTION: Electrical burn injuries are very devastating and are always a challenge for reconstruction and rehabilitation.[1] Children are generally at high risk because of their natural curiosity to explore things.[2,3]. Once injured and amputated at this learning age, they are unable to attend school and fall behind their peers and ultimately affecting their capability to earn a livelihood.

OBJECTIVE: This study was undertaken to analyse the burden of high voltage electrical hand injuries, aetiological factors, pattern of injuries, to contemplate the various preventive measures and to discuss and promote the role of doctors especially hand surgeon in its prevention.

MATERIAL AND METHODS: The study included 83 children below the age of 14 years with high voltage electrical injuries admitted in the hospital from Jan 2010 to Dec 2014. Out of these, 75 patients had injury to their hand which resulted in partial or complete amputaions (32+43). All children were evaluated for etiological factors, pattern of injuries, educational status of the child as well as parents and intervention done. A study specific 10 point questionnaire was prepared to gain insight into the etio-sociological parameters associated with these injuries. Simultaneously an awareness campaign educating the population at risk was initiated (with hand surgeon as the chief campaigner along with few treated patients to play as role model). This included outreach programs in areas from where there was high patient input as well as educating the family of the patient at the time of discharge and every follow up.

Results: Most common cause was accidental contact with the overhead high voltage live wire. Other reasons were illegal connection with high tension wires and transformers, coming in contact with broken live wires in fields, kite flying and railway tract accidents. Most common age group affected was 10 to 14 years. In the last one year it was found out that those areas in which special camps were organized had a statistically significant drop in the incidence of these injuries.

CONCLUSIONS: The incidence of high voltage electrical injuries is higher among the uneducated & unsupervised children. This study emphasizes the role of doctor in prevention of these crippling catastrophic hand injuries by identifying and educating the population at risk and more importantly saving the hands of future.

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