Lightning injury: Changi Hospital experience

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**Introduction:** Lightning injury is a major concern in Singapore, which has one of the highest incidences of lightning activity in the world. This study examined the frequency and type of lightning injuries that presented to an Accident and Emergency (A&E) department situated in the east of Singapore to identify the groups at risk and the spectrum of injuries sustained. **Materials and methods:** This is a case series study with a sample size of 24. Cases that were seen in the A&E department of Changi General Hospital from July 1997 to June 2002 with the International Classification of Disease diagnosis code of E907 for lightning injury were collected and analyzed. **Results:** In our study, 83% lightning injuries were work-related and 79% occurred in those below 40 years old. In the work-related category, a significant proportion occurred at the airport (45%) with most of the incidents occurring while working near or in contact with the aircraft (7 out of 9). The other major proportion occurred at construction sites (40%) with a significant number of cases occurring while in contact with cranes (6 out of 8). There was one telephone-related injury. In the non-work related incidents, two out of four occurred while playing golf. Most of the injuries (87.5%) were minor with no long-term morbidity. There was one death and one critical case requiring cardiopulmonary resuscitation. The latter survived and recovered quite remarkably. One patient had serious depression requiring prolonged treatment. **Conclusion:** Precaution should be taken during lightning-prone weather conditions in workplaces that involve large metal structures like cranes and aircrafts and in open space. This also applies to recreational sports like golf. Lightning injury, though rare, is not uncommon and emergency room doctors should be conversant with the treatment of this condition and its complications. Immediate basic and advanced cardiac life support administered to a lightning casualty who collapsed can be life saving. (Hong Kong j.emerg.med. 2003;10:223-232)

**Keywords:** Arrhythmias, central nervous system injuries, occupational accidents, post-traumatic stress disorders

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