COMPARING PEDIATRIC BICYCLE TO ELECTRIC BICYCLE INJURIES: THE EXPERIENCE OF A LARGE URBAN TERTIARY CARE PEDIATRIC HOSPITAL

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ABSTRACT

Background: Electric bicycles (E-bikes) are one of a wide range of light electric vehicles that provide convenient local transportation and attractive recreational opportunities. They are a proven and appealing alternative to public transport. The aim of this study was to compare bicycle injuries to E-bike related-injuries in children presenting to a Level 1 trauma center. Methods: This was a 12-month retrospective, observational study, from December 2014 to November 2015, which included all patients <16 years old admitted to the emergency department (ED) with an injury related to bike use. Results: A total of 124 bicycle injuries and 97 E-bike injuries presented to the ED during this time period. The mean age of bikers was 9.9 years (range 3-16 years) and of E-bikers was 13.7 years (range 7.5-16 years). Injuries to the head, the upper and the lower extremities were the most common. Twenty patients with bicycle related injuries were admitted and thirteen (15%) patients were admitted with E-bike related injuries. ISS scores were low overall but lower in the bicycle group. Conclusion: Injuries related to E-bikers tend to be more severe. There is a need for regulation regarding the use of E-bikes to enhance the safety of both bikers and other road and pavement users.

Keywords: bicycle; electric bicycle; pediatrics; injury; helmet.