

School Accidents in Educational Establishment in Tunisia: A Five Years Retrospective Survey in the Governorate of Mahdia

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Abstract : Background and aims: School accidents are one of the leading causes of morbidity and mortality among pupils and students. Indeed, they may induce an elevated number of lost school days, heavy emotional and physical disabilities, and financial costs on the victims and their families. This study aims to evaluate the annual incidence of school accidents in the central Tunisian governorate of Mahdia and to identify the epidemiological profile of victims and risk factors of these accidents. Methods: A retrospective study was conducted over the period of 5 school years, focusing on school accidents that occurred in public educational institutions (primary, basic, secondary and university) in the governorate of Mahdia (area = 2 966 km² and number of inhabitants in 2014 = 410 812). All accidents declared near the only official insurance of this type of injuries (MASU: Mutual School and University Accidents), and initially taken in charge at the University Hospital of Mahdia were included. Data was collected from the MASU reporting forms and the medical records of emergency and other specialized hospital departments. Results: With 3248 identified victims, the annual incidence of school accidents was equal to 0.69 per 100 pupils and students per year. The average age of victims was 14.51 ± 0.059 years and the sex ratio was 1.58. Pupils aged between 12 and 15 years, were concerned by 46.7% of the identified accidents. The practice of sports was the most relevant circumstances of these accidents (76.2 %). In 56.58 % of cases, falls were the leading mechanism. Bruises and fractures were the most frequent lesions (32.43 % and 30.51 %). Serious school accidents were noted in 28% of cases with hospitalization in 2.27 % of them. The average lost school days, was 12.23 ± 1.73 days. Accidents occurring during sports or leisure activities were significantly more serious ($p = 0.021$). Furthermore, the frequency of hospitalization was significantly higher among boys (2.81% vs. 1.43%; $p = 0.035$), students ≤ 11 years ($p = 0.008$), and following crush trauma ($p = 0.000$). In addition, the surgical interventions were statistically more frequent among male victims ($p = 0.00$), accidents occurring during physical education sessions ($p = 0.000$); those associated to falls ($p = 0.000$) and to crushes mechanisms ($p = 0.002$), and injuries affecting lower limbs ($p = 0.000$). Following this Multi-varied analysis concluded that the severity of school accident is correlated to the activity practiced during the trauma and the geographical location of the school. Conclusion: Children and adolescents are one of the most vulnerable groups against incidents with the risk of permanent disability, mainly related to the perturbation of the growth process and physiological limitations. Our five-year study, objectified a real elevate incidence of school accident among children and adolescents, with a considerable rate of severe injuries. In any community, the promotion of adolescents and children's health is an important indicator of the public health level. Thus, it's important to develop a multidisciplinary prevention strategy of school accident, based on safety and security rules and adapted to the specificity of our context.

Keywords : children and adolescents, children health, injuries and disability, school accident

Conference Title : ICPHOM 2018 : International Conference on Public Health and Occupational Medicine

Conference Location : Vienna, Austria

Conference Dates : December 27-28, 2018