

**BACKGROUND:** Road Traffic Accidents (RTAs) are a major cause of morbidity and mortality in Kenya. Victims may suffer multiple injuries including maxillofacial injuries. In most developing countries RTAs are the leading cause of maxillofacial injuries. In an attempt to reduce RTAs, the government of Kenya has enacted a legislation requiring mandatory fitting of speed governors and safety belts by passenger service vehicles. **OBJECTIVE:** To describe the characteristics and pattern of maxillofacial and associated injuries sustained in road traffic accidents. **DESIGN:** A cross-sectional study. **SETTING:** Kenyatta National Hospital (KNH). **SUBJECTS:** All patients involved in RTAs brought to casualty and the dental department of KNH as well as accident victims admitted to the KNH mortuary over a four- month period from September 2004 to December 2004. **RESULTS:** Four hundred and thirteen (85.7%) had non-fatal injuries whereas 69 (14.3%) had sustained fatal injuries. Males in the 21-30-year age group were the most affected. Most accidents occurred during weekends with pedestrians being the leading casualties in 59.5% and 71.4% of non-fatal and fatal cases respectively. Most accidents were caused by passenger service vehicles (matatus) which were responsible for 62% and 40.6% of non-fatal and fatal injuries respectively. Non-use of safety belts was reported in 56.6% of the cases who suffered non-fatal injuries. In the non-fatal category 89.6% of the casualties had soft tissue injuries (STIs) involving the craniofacial region with facial cuts being the majority (69.2%). Two hundred and seventy three (66.1%) incidents of other STIs than those of the head region were noted, the lower limbs accounting for 45.4% of these. Only 5.1% of the casualties with non-fatal injuries had fractures involving the maxillofacial skeleton. Skeletal injuries other than those involving the maxillofacial region were found in 142 (34.1%) incidents. In the fatal category head injury alone was the leading cause of death accounting for 37.7% of the cases followed by head and chest injuries combined which were responsible for 13% of the cases. **CONCLUSION:** Injuries to the maxillofacial skeleton appear to be uncommon in this series. Pedestrians in their third decade of life are most affected with passenger service vehicles being responsible in the majority of the cases. **RECOMMENDATIONS:** Interventional programmes targeting pedestrians and those in the third and fourth decades of life should be enacted.