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Case Report

Micro-scooter induced dental trauma: a case report

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Abstract – There has been a remarkable increase in the popularity of micro-scooters over the past few years. This has brought with it an astonishing rise in the number of associated injuries. Highlighted here is a case report which outlines the dental injuries associated with the use of a micro-scooter.

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The rise in popularity of micro-scooters has dramatically increased over the few years (1). This has been accompanied by an astonishing increase in the number of related injuries, particularly amongst children (1, 2, 5, 7). Micro-scooters are small, made of aluminium often weighing less than 10 lbs and have the capacity to reach speeds of up to 25 miles an hour (1, 3, 5). The reported spectrum of injuries ranges from lacerations, abrasions, fractures to severe head injuries (2, 4, 5). The following case report details an oro-facial injury sustained whist using this type of scooter.

Case report

History

A fit and healthy 9-year-old boy presented to the accident and emergency department following an accident whist riding a micro-scooter. The patient reported that he fell from the scooter whilst riding near a ditch. The exact mechanism of the fall was not known and the patient was not wearing any protective head and body gear.

Examination

The patient presented with a diffuse swelling over the right side of the face with no associated head injury. He sustained no external surface lacerations or abrasions. Intra-oral examination revealed a wound in the upper right quadrant with an apparent intrusion of the upper right first permanent molar. The parent reported a copious amount of bleeding from the mouth at the time which had been controlled with pressure on his arrival to the accident and emergency department.

Radiographic evaluation revealed the upper right first permanent molar was completely intruded resulting in the displacement of the developing upper right second permanent molar.

Treatment

Under general anaesthesia, the upper right first permanent molar was found to have been rotated distally by 90 degrees resulting in the displacement of the developing upper right second permanent molar. The upper right first permanent molar was extracted and the developing upper right second permanent molar was carefully manipulated into a more favourable position. Primary closure was attained over the developing tooth without tension.

Postoperatively a course of amoxicillin 250 mg three times daily for 5 days was prescribed and the patient made an uneventful recovery. Regular clinical and radiographic review over the next few years have been planned to access the eruptive potential of the upper right second permanent molar.

Fig. 1. Micro-scooter.

Fig. 2. Patient presenting with right sided facial swelling.

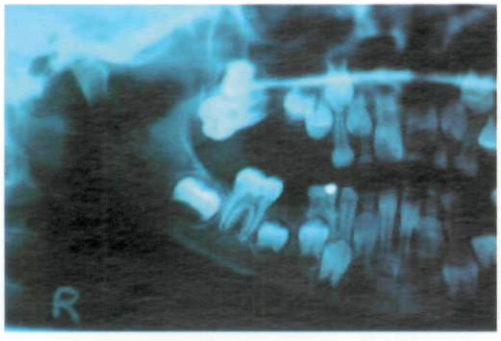

Fig. 3. DPT showing displaced upper right first permanent molar.

Discussion

Micro-scooters have become a popular craze of the 21st century. In the UK, it was estimated that 10 000 micro-scooters were sold every week in the year 2000 alone (1).

The above case represents an unusual example of an isolated intra-oral injury sustained whilst riding a micro-scooter. It appears that the child lost balance whilst on the micro scooter and fell onto the handlebars with an open mouth. The instability of these scooters is inherent in its design. These very light weight aluminium scooters are hardly a few inches off the ground, without any suspension and are supported by two small low friction wheels similar to those used in rollerblades (2, 3). The unstable design of the micro-scooter along with the uneven surface it was being ridden on, has contributed to this patient's injuries.

Fig. 4. Surgical location of displaced tooth.

Majority of micro-scooter related injuries involve children between the ages of 5 and 14 years, of which a large proportion are male and unsupervised (3, 4). One recent study noted almost half of the cases had sustained some form of facial trauma of which 17% of patients presented with dental trauma to either one or both upper incisors (7). Fracture of the elbow was noted as the most common type of injury associated with micro-scooter accidents (4).

The majority of micro-scooter related injuries tend to be minor. However, in one report, a 48-year-old female rider sustained severe head injury which left her in a permanent vegetative state (2). In this particular case, the scooter was used on a street pavement at a moderate speed with no protective helmet or gear. It has been suggested that the wearing of helmets could be invaluable in preventing head injuries (7).

There is increasing number of micro scooter visible on pavements and public places in the UK. It is therefore not surprising that a majority of injuries sustained by children using micro-scooters are in public places (8).

Micro-scooters remain an obvious source of enjoyment especially for the younger generation. They have been considered a public nuisance by many councils in the UK. In fact one London council considered banning their use in certain public areas (1, 6).

Conclusion

This case highlights the need for better public awareness with regards to the potential damage that

can be sustained from the use of micro-scooters. Perhaps, the manufacturers should undertake a role in highlighting the dangers of using micro-scooters incorrectly to the customers. The increased use of protective gear and mouth guards should possible be advocated. Greater parental supervision and restricted use in public places would be beneficial in reducing the incidence and severity of these injuries. For the time being however, we can expect to see an increase in the number of injuries associated with micro-scooters.

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