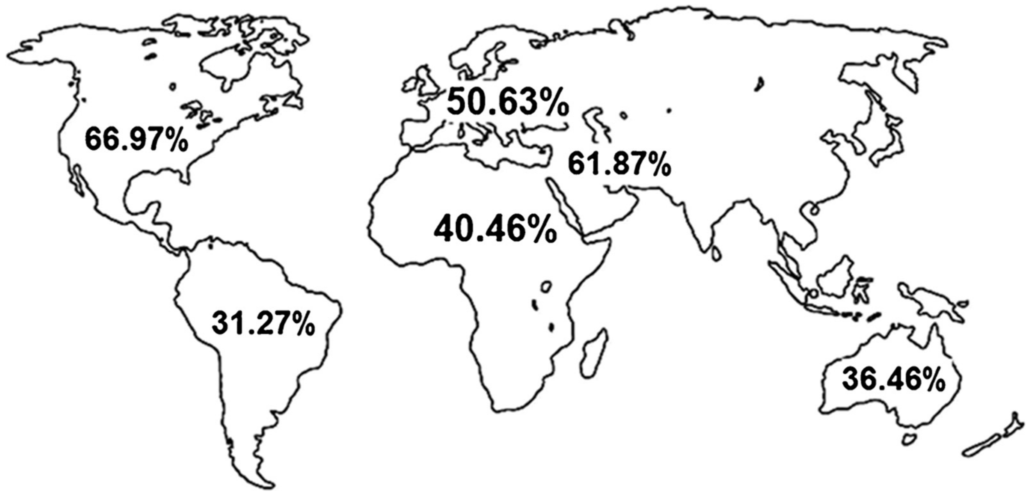

Figure 5. Pooled frequency for PI on dentists in 1 year by continent, performed using MedCalc version 14.8.1. (Courtesy of Pereira MC, Mello FW, Ribeira DM, et al: Prevalence of reported percutaneous injuries on dentists: A meta-analysis. *J Dent* 76:9-18, 2018.)

DISCUSSION

The review and meta-analysis of these 55 observational studies reported a fairly high prevalence of PIs among dentists. The instrument most often involved was the dental bur, and the geographic distribution of PI prevalence showed considerable variance.

Clinical Significance

Being aware of the danger of the dental bur, as well as other sharp dental instruments, may help provide a basis for developing safety policies for their use. In addition, dentists may want to search for safer devices to avoid PIs. Overall, clinicians need to recognize the importance of work safety and take steps to ensure that fewer incidents causing PIs occur in each dental office.

Pereira MC, Mello FW, Ribeira DM, et al: Prevalence of reported percutaneous injuries on dentists: A meta-analysis. *J Dent* 76: 9-18, 2018

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DENTAL TRAUMATOLOGY

Lateral luxation injury

BACKGROUND

Young patients are more likely to suffer traumatic dental injuries than adults. Among the possible injuries seen are lateral luxation injuries, which consist of a displaced tooth in the palatal/lingual or labial direction and tend to occur in children age 1 to 4 years, with boys involved more often than girls. The alveolar process is fractured, making the tooth immobile. Often these injuries present as periodontal ligament space on eccentric or occlusal radiographs. Percussion can yield an ankylotic sound, and sensibility tests are often negative. Between 29.5% and 57% of all dental injuries are lateral luxation injuries. Even if they are properly treated with repositioning and splinting, the teeth suffering these injuries may develop long-term complications such as pulp necrosis with infection and periapical inflammation. The prognosis of immature teeth suffering lateral luxation injuries was evaluated.

METHODS

The data were culled in a systematic review from the Medline, PubMed, Scopus, LILACS, EMBASE, and Cochrane databases up to October 2017. Reference lists were also hand searched, with an eventual identification of 6 studies that met the inclusion criteria.

RESULTS

The diagnostic criteria used were not well described in the studies, so the heterogeneity of the results did not permit statistical analysis. The outcomes identified included pulp canal obliteration (31.3%), pulp necrosis (17.5%), internal root resorption (0.9%), external surface resorption (3.2%), external inflammatory resorption (5.7%), and external replacement resorption (1.4%). Clinicians need to monitor patients for the development of these complications.

DISCUSSION

Pulp canal obliteration was the most common complication seen in immature teeth suffering lateral luxation injuries. These children need to be followed up carefully to address possible complications.

Clark D, Levin L: Prognosis and complications of immature teeth following lateral luxation: A systematic review. *Dent Traumatology* 34:215-22, 2018

Clinical Significance

In dental trauma, randomized controlled trials focused on specific outcomes can be nearly impossible to conduct. A core outcome set was developed to assess possible outcomes and agree on the inclusion of core or generic outcomes. For dental trauma, these include injury activity, physical consequences of disease, functional status, social outcomes and quality of life, side effects of therapy, and health resource use. The core outcome set is designed to help guide the reporting of traumatic dental injuries and facilitate the accumulation of more accurate evidence regarding the outcomes of these injuries. This can lead to more accurate prognostic and treatment evaluations for traumatic dental injuries.

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Bicycle helmts

BACKGROUND

Cycling can be a popular way to engage in physical fitness activities, get to work, or simply be transported from one place to another. The benefits of cycling are many, but there are also dangers, such as the risk for facial injuries. Cycling is reported to cause 3% to 19.69% of all facial injuries severe enough to prompt a visit to the hospital. Helmets are advised as a way to prevent head injuries, but their role in protecting against facial injuries isn't as clear. The effect of bicycle helmets on the incidence of facial injury was investigated.

METHODS

A literature search was conducted in the PubMed/MEDLINE, Google Scholar, and Cochrane Library databases. The inclusion criteria focused on adult participants and observational studies. Nine studies were included in the analysis.

RESULTS

The 9 studies included 23,461 participants. Five of the studies included a separate analysis of facial fractures. Those who wore helmets were less likely to sustain a facial injury. A high degree of heterogeneity was noted between the studies.

In the 5 studies with the separate facial fracture analysis, there were 19,266 participants. Helmets were found to be protective against facial fractures compared to no helmets. The degree of heterogeneity was less in this analysis than in the previous one.

The protection afforded by helmets is not uniform across the face. The upper and middle facial areas are protected more than other areas.

DISCUSSION

Bicycle helmets were shown to offer a protective benefit against facial fractures. Future studies are needed to investigate the relationship between helmets and facial injury, with special attention to the areas of the face that are being protected and the areas that are not.

Clinical Significance

Further study is needed, but it appears that wearing a bicycle helmet is protective against facial trauma affecting the mid face and upper facial areas. Bicycle helmet wearing should be seen as a protective measure, since there tends to be a high degree of morbidity associated with cycling injuries, with 70% of those injured suffering reduced function for up to 6 months.