Fracture strength and core restoration improves tooth fracture mode

By DTI

BEIJING, China: Researchers from the General Hospital of the Air Force of the Chinese People’s Liberation Army in Beijing recently evaluated the fracture resistance of maxillary incisors with flared root canals restored with CAD/CAM-integrated glass fibre posts and cores. The study found that this approach achieved improved results compared with conventional treatments.

The researchers treated 30 prepared flared root canals in vitro and restored these with CAD/CAM-integrated glass fibre posts and cores, prefabricated fibre posts and cast gold alloy, respectively. After exposure to fatigue loading, each specimen was subjected to static loading until fracture.

The findings showed that the mean fracture strengths of the teeth treated with CAD/CAM-integrated glass fibre posts and cores, and cast gold alloy were significantly higher than those restored with prefabricated fibre posts, whereas no differences were observed between the first two treatments. In addition, repairable fracture modes were mostly observed in teeth treated with CAD/CAM-integrated glass fibre posts and cores, while irreparable and catastrophic fractures were mainly found in the other teeth. These results demonstrate that, in comparison with conventional treatments, CAD/CAM-integrated glass fibre post and core restoration significantly enhances the fracture resistance of maxillary central incisors with flared root canals.

The study, titled “Fracture behaviour of maxillary central incisors with flared root canals restored with CAD/CAM-integrated glass fibre post-and-core”, was published online in Dental Materials Journal on November 2018 ahead of inclusion in an issue.

New standard to be developed for sterile reprocessing in dental practices

By DTI

SYDNEY, Australia: Among the issues arising for small dental practice owners is adhering to regulations that are more applicable to larger institutions such as hospitals. In what the Australian Dental Association (ADA) is calling a “significant advocacy win”, Standards Australia has accepted a proposal to develop a new standard for sterile reprocessing of reusable medical devices and surgical instruments.

According to the ADA, it has lobbied for the past few years to prevent Australian and New Zealand Standard AS/NZS 4187 from becoming the required standard applicable to small office-based practices. The new standard that will now be developed over the next several years will replace both AS/NZS 4187 and AS/NZS 4815.

The decision follows a discussion on whether there was an ongoing need to maintain two different standards, given the conclusion over which standard applied in which setting, or if it would be preferable to move to a single document that would meet the needs of any situation where sterile reprocessing is required.

In response, newly elected ADA Federal President Dr Carmelo Bonanno praised the decision as an important positive step forward, noting that “AS/NZS 4187 is a standard more applicable to large health care organisations and would have placed unreasonable demands on dental practices which would have resulted in increased costs for patients”.

It is envisaged that the single standard will be supported by a set of complementary implementation guides that will explain the application of the standard to particular settings. Throughout the development of the new standard, the ADA will remain closely involved and eventually align its own infection control guidelines to it once ready, however, until then the existing standards remain in place.

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