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A clinical study evaluating the proximal contact integrity in Kashmir population

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Abstract
The proximal contacts of 40 subjects were evaluated by passing the shim stock through them. The shim stock passed through 92% of contacts. The shim stock passed through 90% of natural contacts and 82% of restored contacts. Neither sex nor age displayed a significant correlation to shim stock passing through contacts. It was easier to pass the shim stock through natural contacts than through the restored ones.

Keywords: Proximal contact, shim stock, dental floss, calculus

Introduction
In 1985, Sluder defined the proximal contact area as 'the area of proximal heights of contour of the mesial or distal surface of a tooth that touches its adjacent tooth in the same arch'. In 1981, Howard & Moller stated that proximal contacts should not be too tight to result in wedging of teeth. On the other hand, a weak proximal contact may attribute to vertical food impaction, proximal caries, periodontal loss and drifting of teeth.

Some authors recommend dental floss for detecting the proximal contact integrity. Lindquist (1951) [2], however, refuted this; because he found that small spaces occur between natural teeth, and floss does not properly detect these spaces. Campagni (1984) [1] suggests that seat the fixed prosthesis under finger pressure and adjust until 0-0005-in. shim stock passes through proximal contacts with very slight resistance, but two thicknesses will hold and not pass.' He observed that most unrestored proximal contacts will permit passage of shim stock in a like manner

Aims and Objectives: This study was conducted to evaluate proximal contact integrity shim stock (0.0005-in.)

Materials and Methods: The sample consisted of 24 Kashmiri males and 24 Kashmiri females with age ranging from 20-50 years. They displayed a variety number and type of restorations. Though some presented with congenitally missing teeth.

Inclusion criteria
i.   Absence of supragingival calculus
ii. No orthodontic treatment done

Exclusion criteria
i.   Presence of supragingival calculus
ii. Orthodontic treatment done

A 6mm wide and 4cm long shim stock 0.0005-in was held between the thumb and forefingure of each hand and was made to slip through each proximal contact. The proximal contact integrity was divided into two groups as under
Group I proximal contact: the contacts through which the shim stock entered and passed freely without any resistance.
Group II proximal contact: the contacts which resisted the entry and passage of shim stock.

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With the exception of third molar contacts, all contact areas were tested on each subject and the data recorded.

Results

The shim stock passed through 92% of contacts. The shim stock passed through 90% of natural contacts and 82% of restored contacts. Neither sex nor age displayed a significant correlation to shim stock passing through contacts. It was less likely for the shim stock to pass through restored contact than through natural contact of enamel surfaces.

Discussion

The study revealed that 8% of contacts through which shim stock did not pass were mandibular anterior teeth with attrition and crowded posterior teeth with maligned marginal ridges and cusps. The shim stock passed through 90% of natural contacts and 82% of restored contacts. It indicates that restorations are placed in more tight contacts than the natural teeth.

Conclusion

The emphasis must be given to the proximal contact integrity in relation to the importance of correct contact anatomy and physiology. When restoring proximal contact, the clinician should not intentionally build the contact too tight to allow the passage of 0-0005-in shim stock through the contact.

References

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