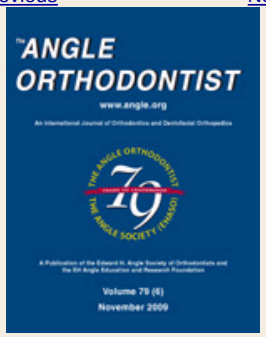
Volume 79, Issue 1
(January 2009)

< Previous Next >



Current Issue
Available Issues

Journal Information

ISSN: 0003-3219
Frequency: Bimonthly

Previous Article Volume 79, Issue 1 (January 2009) Next Article

Add to Favorites Share Article Export Citations Track Citations Permissions

Full-text PDF

P. S. Fleming, A. T. DiBiase, G. Sarri, R. T. Lee (*2009*) Pain Experience during Initial Alignment with a Self-Ligating and a Conventional Fixed Orthodontic Appliance System. The Angle Orthodontist: Vol. 79, No. 1, pp. 46-50.

Original Articles

Pain Experience during Initial Alignment with a Self-Ligating and a Conventional Fixed Orthodontic Appliance System

A Randomized Controlled Clinical Trial

P. S. Fleming[a], A. T. DiBiase[b], G. Sarri[c], and R. T. Lee[d]

Abstract

Objectives: To test the hypotheses that (1) there is no difference in the pain experience during the week following initial placement of two orthodontic appliances (SmartClip™ and Victory™; 3M Unitek, Monrovia, Calif); and (2) there is no difference in the pain experience during removal and insertion of orthodontic archwires with these brackets.

Materials and Methods: Sixty-six consecutive patients were treated with a self-ligating bracket system (SmartClip™) or a conventional appliance (Victory™) on the basis of computer-generated random allocation. After appliance placement and engagement of a 0.016″ nickel-titanium archwire, pain experience was recorded after 4, 24, and 72 hours and after 7 days with the use of a visual analog system (VAS) questionnaire. At a subsequent visit, participants documented pain experiences during removal and insertion of 0.019 × 0.025″ archwires on an additional 100 mm VAS questionnaire. Independent *t*-tests and analyses of covariance were used to analyze normally distributed data; the Mann-Whitney *U*-test was used for skewed distributions.

Results: Forty-eight (72.2%) and fifty-one (77.3%) subjects completed the first and second parts of the study, respectively. Bracket type had no influence on pain experience at 4 hours ($P = .958$), 24 hours ($P = .289$), 72 hours ($P = .569$), and 7 days ($P = .756$) following appliance placement. However, bracket type significantly influenced pain experience during archwire removal ($P = .001$) and insertion ($P = .013$).

Conclusions: Hypothesis 1 cannot be rejected. The bracket type had no effect on subjective pain experience during the first week after initial placement of two preadjusted orthodontic appliances. Hypothesis 2 was rejected. Significantly greater discomfort was experienced during archwire insertion and removal with the SmartClip™ appliance.

Keywords: Pain, Orthodontic, Self-ligating, Appliance

Accepted: December 2007;

[a] Specialist Registrar in Orthodontics, Royal London Hospital, London, UK

[b] Consultant Orthodontist, Kent & Canterbury Hospital, London, UK

[c] PhD Research Student, Royal London Hospital, London, UK

[d] Professor, Department of Orthodontics, Royal London Hospital, London, UK

Corresponding author: Dr P.S. Fleming, Specialist Registrar in Orthodontics, Royal London Dental School, Whitechapel,

London E1 1BB, UK (padhraigfleming@hotmail.com)

Cited by

Padhraig S. Fleming and Ama Johal. (2010) Self-Ligating Brackets in Orthodontics. *The Angle Orthodontist* **80**:3, 575-584
Online publication date: 1-May-2010.
Abstract | Full Text | PDF (389 KB)

Related Articles

Articles Citing this Article

Google Scholar

Search for Other Articles By Author

- P. S. Fleming
- A. T. DiBiase
- G. Sarri
- R. T. Lee

Search in:

- Angle Online

Search

top