

## Comparison of duration of orthodontic treatment with and without extraction among orthodontic patients

Bhattarai P<sup>1</sup>, Shrestha RM<sup>2</sup>, Mishra P<sup>3</sup>

<sup>1</sup>Associate Professor, <sup>2</sup>Assistant Professor, Kantipur Dental College and Hospital, <sup>3</sup>Professor, National Academy of Medical Sciences

### Abstract

**Objective:** To compare the effectiveness and duration of orthodontic treatment between Nepalese orthodontic patients with extraction and with non-extraction treatment basis.

**Materials and methods:** A total of two hundred orthodontic patients with proportional number of patients treated on extraction and non-extraction basis were evaluated from two exclusive orthodontic practice centers. All patients were treated with Straight Wire brackets. Transferred patients and previous orthodontically treated patients were excluded from the study.

**Result:** The average duration of orthodontic treatment was 28.5 months for all orthodontic patients with no statistical difference between the extraction and non-extraction groups. The study however found that the treatment for those with extraction cases were more likely to take longer duration clinically than the non-extraction cases.

**Key words:** Duration, Extraction, Non-extraction

### Introduction

The extraction versus non-extraction debate is one of the earliest and most lasting philosophic controversies of orthodontic practice with both biologic and mechanical ramifications<sup>1-3</sup>. In clinical practice many orthodontic patients are obviously concerned about the duration of time that they will be required to wear fixed orthodontic appliances. Estimates of treatment duration would also be useful to clinicians for efficient office management. Treatment duration is affected by several variables<sup>4</sup> such as treatment basis (extraction vs. non-extraction), sex (male vs. female), age group (adolescent vs. adult), and malocclusion type. Furthermore, other variables like missing appointments, breakage of appliance, patient co-operation (i.e. wearing of elastic, bite plate etc.), number of dental arches treated, number of treatment phases etc. may also contribute to longer duration of orthodontic treatment. Most of the authors believe that the duration of orthodontic treatment mainly depend on patient co-operation<sup>5-7</sup>.

The objective of the present study was to compare and evaluate how the extraction versus non-extraction

treatment basis affect the duration of orthodontic treatment among Nepalese orthodontic patients.

### Materials and methods

Orthodontic records were obtained from two exclusive orthodontic practice centers with subjects treated with Straight Wire appliance. A total of 200 patients comprising of 101 patients treated with extraction basis and 99 patients treated with non-extraction basis were analyzed for the study. 80 patient records were collected from Department of Orthodontics, People's Dental College and Hospital (PDCH), Kathmandu, and 120 from The Orthodontic Center (TOC), Kathmandu. Consecutively treated cases starting from June 15, 2002 and completing by June 15, 2007 were evaluated.

The start of treatment was defined as the date of first arch wire placement and completion of treatment as the date on which fixed appliances were debonded completely. Only those cases with complete pre-treatment and post-treatment records comprising of study models and written treatment records were included. Transferred cases, two

### Correspondence

Dr. Prakash Bhattarai, Associate Professor, Kantipur Dental College and Hospital, Kathmandu  
E-mail: prakashbhattarai@yahoo.com