

Increasing practice efficiency, profitability using InOvation 'R' self-ligating brackets

A White Paper report

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Many unsubstantiated claims have been made concerning self-ligating bracket systems as to their efficiency in moving teeth, the time savings that can be realized by using these appliances and the "magic" that is somehow stored up in these brackets to more effectively align teeth.

This study was done in an effort to draw some scientifically based conclusions to more accurately differentiate between what is "hype" and what is actually true regarding the purported increased efficiency and time savings of one such self-ligating bracket system: InOvation "R", manufactured by GAC International.

The study was performed to determine if cases treated with InOvation "R" brackets were actually treated faster, with fewer and shorter appointments with less clinical chair time needed to complete treatment, and if they truly increase practice efficiency and profitability compared to similar cases treated with traditional edgewise brackets.

Are there other scientific studies available?

Recently, there has been a cry from the scientific community regarding evidence-based studies that will differentiate between opinion and fact.¹⁻⁴ It is

important for our profession, if we are to remain rooted in scientific principles, to honestly research, study and report on the claims made by our fellow professionals and the orthodontic supply companies.

At the present time, there actually have been a surprising number of scientific studies performed that have reported the increased efficiency of self-ligating brackets.⁵⁻¹³ Most of these reports, however, have studied other bracket systems, such as Damon and Speed.

To date, no scientific study has been applied exclusively to the InOvation "R" bracket system to measure the treatment and chair-time savings resulting from using this appliance. That is the reason for this research study.

How was this study performed?

Treated orthodontic cases were randomly selected from the practice of Dr. Jerry Clark, a board-certified orthodontist. No attempt was made, in this study, to quantify the quality of the final treatment results. It was assumed that Clark utilized all his technical skills and abilities to achieve the best treatment results possible for each individual patient.

One hundred fourteen cases treated with InOvation "R" were studied and compared to 241

COMPARISON: MONTHS IN TREATMENT AGES: 10 TO 59

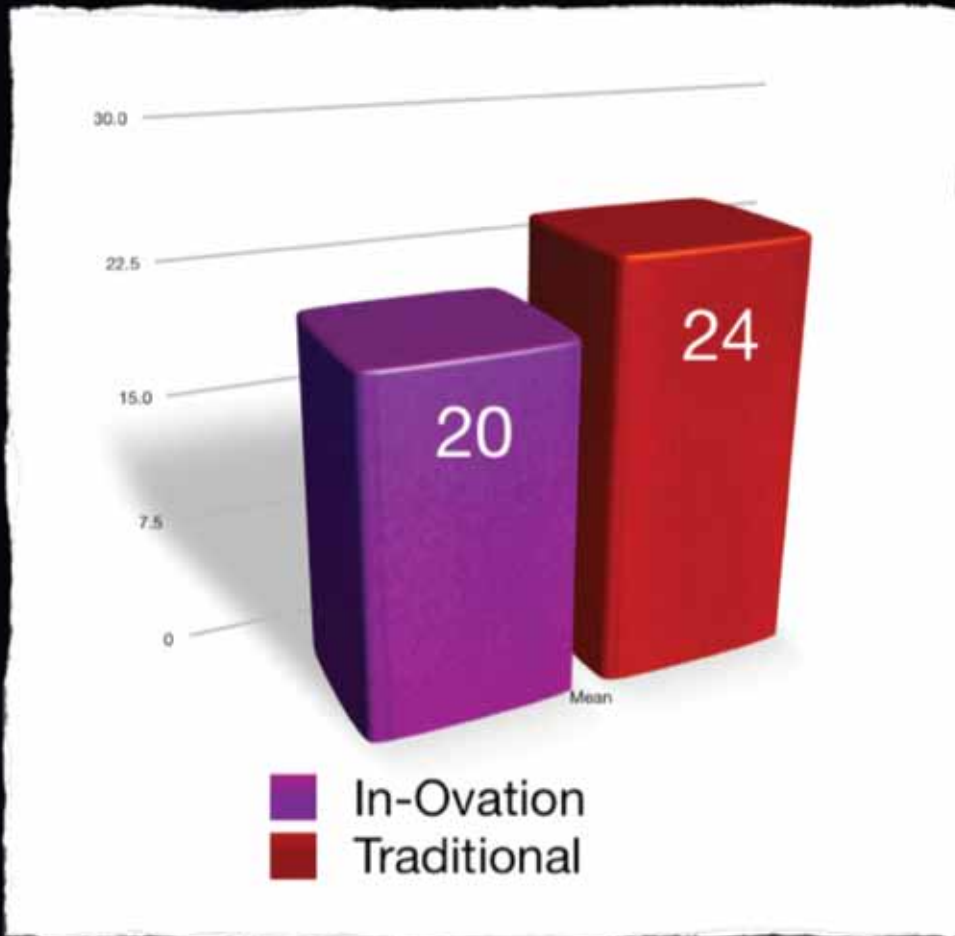


Fig. 1

Fig. 1 The average number of months required to treat cases utilizing InOvation 'R' was 4.14 months less than comparable cases being treated using traditional edgewise brackets. (Illustrations/Provided by GAC International)

cases treated with traditional pre-torqued and pre-angulated brackets. This produced a confidence level for this sample of 95 percent +/- 8 percent.

Certain types of cases were eliminated from the study. Those excluded were: cases with an unusual number of missed or broken appointments, cases with an unusual number of loose or broken brackets, cases that required two-phase treatment, cases with significant skeletal discrepancies (Class III, skeletal open bites), cases with impacted canines, cases with extremely poor cooperation and cases where some other circumstance significantly impacted Clark's ability to complete treatment in a reasonable length of time.

This research project was managed by Jack Gebbie, president, DATATEX Inc., an independent research and consulting firm specializing in market research.

The data files were carefully reviewed, and marketing research standards were applied to the sampling to ensure comparisons would be valid across the two alternatives being studied.

DATATEX is a member of CASRO (Council of American Survey Research Organizations) and maintains research integrity and standards consistent with this organization.

What was specifically studied?

The study was fairly simple in its design. Patients treated with traditional edgewise brackets and Roth and Tweed-type mechanics with the goal of attaining the Andrews 6 Keys to Occlusion¹⁴ were compared to cases treated with InOvation "R" brackets and the light wire mechanics typically used with self-ligating

COMPARISON: NUMBER OF APPOINTMENTS AGES: 10 TO 59

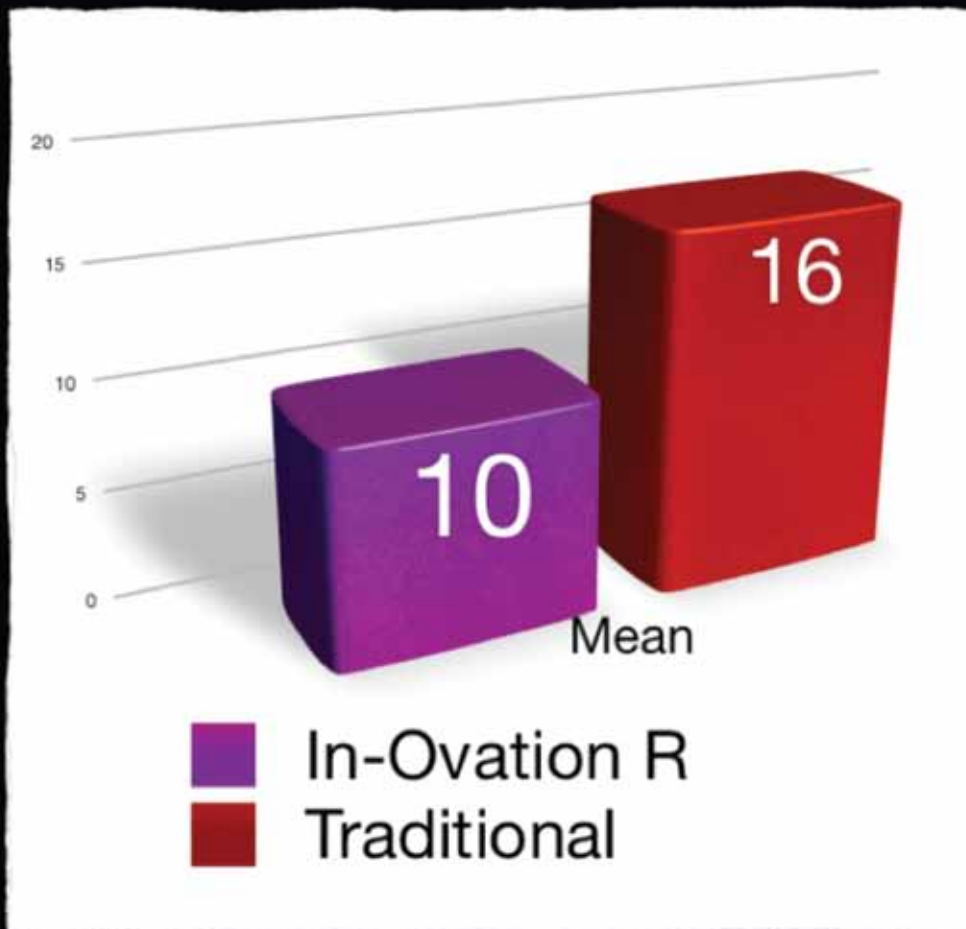


Fig. 2

Fig. 2_ The average number of patient appointments needed to complete treatment was reduced by 6.66 appointments.

brackets with the objective of achieving similar treatment objectives.

The time required to place brackets at the beginning of treatment and the time necessary to remove appliances at the end of treatment was not included because it is realistic to assume that it takes approximately the same amount of time to place and remove brackets regardless of the type of brackets being used.

What was studied was the actual treatment time from the day treatment was begun to the day appliances were removed. Also, the total number of patient visits needed to complete treatment was measured, as was the total number of minutes of patient chair time necessary to complete treatment.

Are self-ligating brackets really faster? More efficient? Better?

The answer is YES!

What were the findings of the study?

Months in treatment

The average number of months required to treat cases utilizing InOvation "R" was 4.14 months less than comparable cases being treated using traditional edgewise brackets.

Number of appointments

The average number of patient appointments

COMPARISON: CHAIRSIDE MINUTES AGES: 10 TO 59

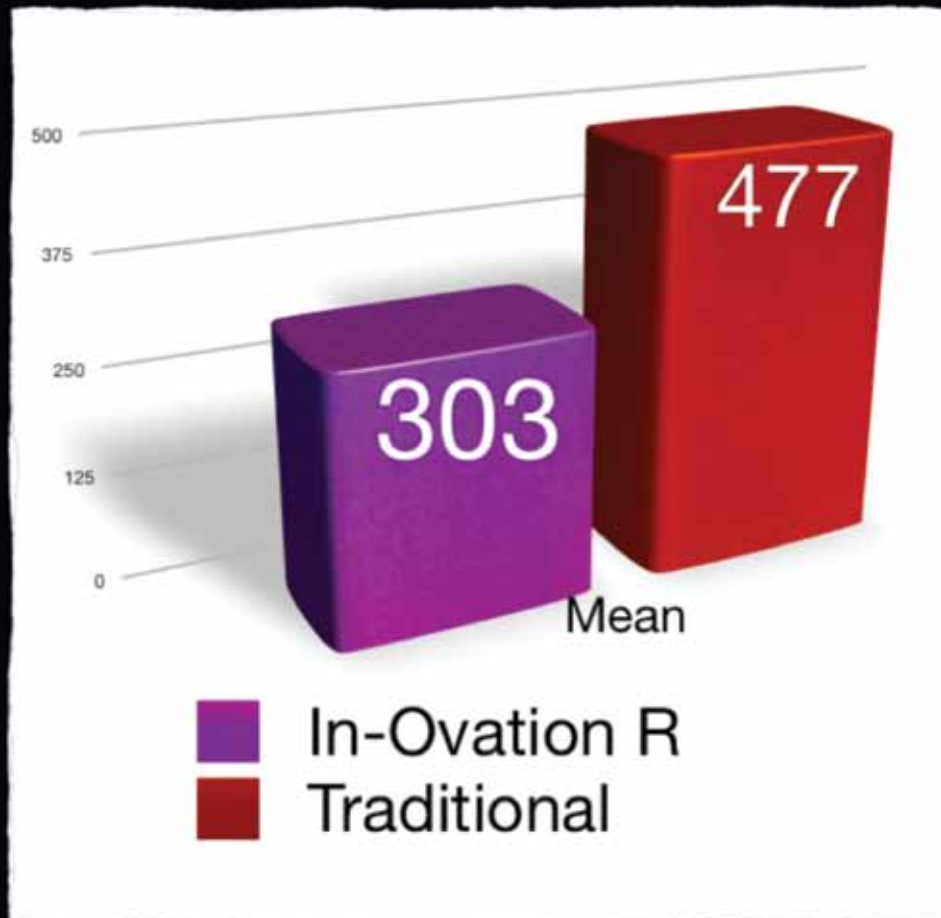


Fig. 3

needed to complete treatment was reduced by 6.66 appointments, which meant 40 percent fewer appointments were required to complete treatment using InOvation "R" compared to traditional edgewise appliances.

Chair time required to treat cases

The number of minutes of clinical chair time that patients required in order to complete treatment was reduced by an average of 174.21 minutes per patient, or put another way, approximately three hours of chair time was saved on each treated patient.

That means the average case being treated with InOvation "R" took approximately five hours of chair time to treat while the average case being treated with traditional appliances took almost eight hours to treat, a time savings of approximately 36 percent.

How does the reduced chair time impact practice profitability?

Suppose your practice produces a profit of \$350 per hour (an average figure for an active well-managed practice), and you are able to save three hours on each case you treat. Then the profit for each case treated is increased by approximately \$1,050.

However, InOvation "R" brackets do cost more than traditional edgewise brackets by approximately \$5 per bracket. That means if you bond five to five, you use approximately 20 brackets on each case for an additional expense of about \$100 per case. So the actual estimated additional profit for each case using this scenario is about \$950. That is a pretty good return on an additional investment of \$100 for InOvation "R" brackets.

Fig. 3 The number of minutes of clinical chair time that patients required in order to complete treatment was reduced by an average of 174.21 minutes per patient.

However, this is just an average. If your practice profit per hour is less than \$350 per hour, then your savings will be somewhat less. But if your practice profit is more than \$350 per hour, then your profit will increase even more.

So what's the bottom line?

Granted, a competent and conscientious orthodontist can most likely obtain excellent treatment results regardless of the type of appliances he or she chooses to utilize. I am often questioned by my colleagues, "Why should I change? Why should I pay more for InOvation "R" brackets when I am already achieving excellent results with my present bracket system?"

The critical and more important question is, "What is best for our patients?"

If we as orthodontists are committed to providing the very finest treatment for our patients, I personally feel it is important we look at the findings of this study and draw the obvious conclusions concerning the treatment of our patients.

If we want to provide the very finest orthodontic care, in the most cost-effective manner with the least amount of discomfort to our patients, with the fewest number of visits required, and provide shorter appointment times while completing treatment as quickly as possible, I feel it now requires us to avail ourselves of the advanced technology of self-ligation.

Anything less would not be providing the finest available treatment for our patients.

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about the authors

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Jack Gebbie is president of Datatex Inc. and has handled research projects for both national and regional companies for more than 11 years with particular experience and expertise in the fields of health care and financial services. He is a graduate of Wake Forest University and is a member of CASRO (Council of American Survey Research Organizations) and conforms to the research integrity and standards established by this national organization.

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