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THE READERS' CORNER

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Topics are thermally activated wires and computer uses.

1. How often do you use thermally activated nickel titanium archwires, and which brands do you use for alignment, leveling, space closure, and finishing?

Eighty-five percent of the respondents used thermally activated nickel titanium archwires. They were routinely used for leveling and alignment, but only rarely for space closure or finishing. By far the most popular brands were Bioforce by GAC and Copper NiTi by Ormco. A few clinicians used the wires produced by Unitek, Highland Metals, and Masel.

What is the smallest thermally activated nickel titanium archwire you use? What is the largest?

Most respondents said their smallest thermally activated nickel titanium wires were .016" round. (The smallest edgewise wires are usually .016" X .016" or .017" X .025".) About 70% of the orthodontists used .017" X .025" as their largest thermally activated nickel titanium wires, with a relatively even distribution of sizes above and below that size.

How does your archwire placement technique differ with thermally activated wires compared to other archwires?

The replies were relatively consistent. Only 14% said their placement techniques did not differ from those with conventional wires. Most clinicians, however, reported chilling the thermally activated wires by various methods prior to insertion. Three respondents advised heat-treating the distal ends of the archwires for ease in cinching them back. One-third favored wire ligation rather than elastomeric ties. The majority of clinicians appreciated the ability to obtain full bracket engagement right away.

Specific comments were:

- "We freeze Q-tips with Endo Ice to spot-cool wires for complete bracket engagement."
- "We keep them in the freezer to ensure bracket insertion flexibility."
- "They are more frequently tied in with wire ligatures to gain maximum expression."
- "Little overall difference between thermally activated and braided archwires.

How do your patient instructions differ?

Thirty-seven percent of the clinicians reported no difference in patient instructions when using the thermally activated wires. Among the other respondents, the most common instructions were to encourage activation of the wire by rinsing with warm water, and to suggest warm foods and drinks. Cold drinks were recommended if the teeth became sensitive.

Individual responses included:

- "Tell the patient to stay away from cold drinks unless tooth discomfort is evident. Then, drink cool liquids to decrease force and ameliorate discomfort."
- "For amplified wire activation, have the patient rinse with a hot liquid for two to three minutes for five to six days after wire insertion."

How do your normal appointment intervals compare to those with other archwires?

The preponderance of respondents (62%) reported longer intervals between appointments. However, 16% indicated the intervals were shorter, and the remainder said they were about the same.

What advantages do you see with thermally activated wires compared to other archwires?

Most clinicians felt that the thermally activated wires were gentler on patients, required fewer appointments and archwire changes, allowed full initial archwire engagement, and provided more and longer tooth movement, better torque control, and better rotational control.

What disadvantages do you see?

The principal disadvantage mentioned was cost, although this was observed to be mediated by the ability of the wires to stay in place longer. Thirty percent of the respondents believed that the wires were ineffective in leveling arches and obtaining final coordinated archforms. A few respondents thought they were brittle and more prone to breakage.

Some salient comments were:

- "I never use them as an initial wire, because patients often knock a bracket off in the beginning, and we have to clip the wire until the following visit when the bracket can be replaced. Therefore, I always start with an .014" NiTi, and then go to an .016" X .022" Neo Sentalloy in an .018" slot, after I know all the brackets will stay on."
- "I don't like the archform, and leveling leaves something to be desired. In my hands, they are only useful for alignment and rotational control."
- "Evidence is not yet in on possible root resorption or allergic reaction to nickel."

2. Do you currently own or lease an in-office computer system?

Ninety-eight percent of the respondents used computers in their offices.

What kind of hardware and software do you use?

IBM-compatible computers were used by the vast majority of the clinicians, with UNIX and Macintosh having relatively little representation. Most respondents indicated that their office computers were networked; only a few worked with stand-alone units. Nearly all the practices had orthodontic software programs, with Ortho II being the favorite, followed by OPMS and Orthotrac.

How many monitors or terminals are in your office, and where are they located?

Most of the respondents had two to four monitors or terminals, but a few had as many as seven. They were located primarily at the reception desk, business office, consultation-exam room, and operatory. Nearly a third of the orthodontists had computers in their private offices.

Who regularly uses computers in your office?

They were used most often by the receptionist, closely followed by the orthodontist and the business or financial manager. Chairside assistants were less likely to use the computers, and laboratory

assistants used them only rarely.

How has the use of computers affected your office design?

About one-quarter of the respondents indicated that computers had had little or no effect on their current office design; they were simply squeezed in. Twenty-one percent said that computer locations were considered when they designed their offices. There was a strong indication that computer terminals and work stations would have to be taken into account in designing new offices or modifying existing spaces. The most prevalent observation was that more counter space was needed, and that this, in turn, would require larger offices. Traffic and work patterns would also be influenced by the placement of computers throughout the office.

Some specific comments:

- "They have given the office an updated look."
- "I have had to redesign the patient reception and consultation areas."
- "They have greatly reduced the congestion at the front desk, allowing me to reduce the size of this area."
- "Our new office will have terminals at each chair. Larger cabinets will be a necessity."

How has the use of computers affected your staff management?

Eighty-two percent of the respondents either did not answer this question or said that computers had not affected their staff management. However, replies such as these indicated a significant influence:

- "Requires more disciplined training and staff management, and required an additional employee."
- "The efficiencies have resulted in a more effective staff. They can deal with a larger volume of patients without additional stress."
- "They can do cephalometric tracings in their down time."
- "The loss of a key computer employee is terribly disrupting."

How has the use of computers affected your patient management?

Two-thirds of the practitioners reported improvements in scheduling; in tracking of patients' appointments, recalls, and financial status; and in communication with patients through the generation of appropriate letters. Surprisingly, only one clinician reported that the computer was useful in patient education: "Patients love the visual learning through the Dolphin system."

Other replies included:

- "Undoubtedly, our correspondence, tracking of patients, and consolidation of office responsibilities has improved."
- "Patient communication has jumped to significantly higher levels."

How has the use of computers affected your practice management?

More clinicians responded positively to this question than to any other in the survey. The primary benefits centered around tracking of patients, insurance-form management, financial analysis, and written communications with patients and referral sources.

Some selected replies:

- "Immeasurable. Prior to the use of office computers, I had no idea of the exact status of outstanding accounts receivable. Now, I know at a keystroke. Also, all the analysis of computer-generated data gives us the ability to analyze impending problems, and to initiate measures to correct them."
- "Better, more effective scheduling; easier retrieval of vital statistics on which to base our planning, such as number of referrals, types of referral sources, and effectiveness of marketing strategies; and better patient management. All this has improved our goal of giving better service to our patients."

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