The importance of cementation: A veneers case using a new universal cement

By Kerr

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thestic options in den-
tistry are the prevailing
to choose of most patients
today. Veneers and bleaching in par-
cular have become buzz-
words in popular culture, and
tlevision sitcoms, film and magazine advertise-
ing have turned these
toesthetic techniques into house-
hold names. As a result, dental
teams must accommodate the
orders of their patients, be-
coming highly versed in placing
metal-free restorations.

Practitioners can find a multi-
tude of educational articles and
courses teaching the science
and technology of porcelain, zir-
conia and composite. But while
emphasis is frequently placed on
the final prosthesis or direct
restoration, often overlooked are the increasingly important
auxiliaries that contribute
equally to the clinical suc-
cess of these new materials and restorations: impression and
provisional materials, bonding
agents and cements. Education
is imperative because cemen-
tation and bonding are two areas of
esthetic dentistry that have
evolved through generations of
products and techniques.1

These processes are essential in
making esthetic restorations both functional and comfortable.
That's why veneering can be an
optimal, conservative alternative
to crowning teeth, since preser-
vation of tooth structure is im-
portant to dentists and patients alike. The highly esthetic results
are due to the fact that compon-
ents have a translucent finished
surface texture similar to that of
natural enamel.2 Dentists, assis-
tants and lab technicians spend
considerable time and effort
preparing teeth, avoiding
fracture through painstaking
preparation, material and shade
selection, fit and fabrication.
Yet even after such arduous
processes, clinical failure and
patient dissatisfaction readily
occur with errors in cemen-
tation.

Cementing veneers is a delicate
process with a historical litany
of potential problems—color
instability, insertion difficulty,
handling and cleanup issues, unsatisfactory radiopacity, low
translucency after curing, mis-
match between try-in goals and
final cements, and debonding, to
name a few. Cement selection in
certain applications necessitates the knowledge of the chemistry and
physiological properties of the partic-
ular cement type and insertion
requires an exacting technique for successful clinical results.

This article outlines a veneer
case using NX3 Nexus® Third
Generation—a new, universal cement from Kerr. The subject
is a long-standing patient-of-re-
cord with a current radiological
and medical chart. This focus is
on the steps and techniques im-
plemented at final cementation
of the prostheses.

Clinical Case

A female patient in her mid-
fifties presented a chief com-
plaint of being unhappy with her
smile. An examination of her
hard tissues revealed immediate
concerns of multiple fractures,
hypocalcification, shortened an-
terior teeth due to wear and an
asymmetrical smile line (Fig-
ures 1 and 2). After proposing a first phase
treatment plan to restore all of
her compromised upper ante-
rior teeth, the patient consented
to restoring only teeth numbers
6-11. The patient ultimately
were placed prior to light-curing.

Prior to preparation, the tissue
was light-cured for 40 seconds
(Figure 10). The veneers then
were light-cured for 10 seconds using the
L.E. Demetron II curing light
(kerry) (Figures 7 and 8).

After etching and bonding, the
veneers were cemented using
NX3 light-cure cement in the
clear shade (Figure 9). The ce-
ment was dispensed directly onto the internal surface of the
veneer and was expected to
ooze from all margins when the
tooth surfaces were finished. With the choice
of either the single-syringe
light-cure veneer cement or the
dual-syringe dual-cure resin, the
light-cure method was used
because the veneers were not
inappropriately thin. NX3 allows
veneers to be cemented at all
to once (as opposed to cementing
centrals first, laterals second, and
so on) because of its unique
“dimensional” properties, which
enable them to stay where they
are placed prior to light-curing.
On the other hand, the
choice of material is not
profoundly different and
placement easier while decreasing the need to ad-
just the veneers interproximally
and proper placement easier
instead of curing. This feature
makes adjustments easier and
allows for easier light curing.

Prior to final curing, the res-
torations were spot-cured for
15 seconds to allow the excess
cement to be cleaned (Figure 10). The veneers
were then air-thinned for 3 seconds, and
cured for 10 seconds using the
L.E. Demetron II curing light
to achieve maximum polymerization
and control bleaching in that area
(Figure 4).

The teeth were then etched
for 15 seconds with Kerr Gel
Elvchant, which is composed of
57.5% phosphoric acid (Figure
5), and then rinsed and slightly
hydrated. (Note: While a total-
etch technique was used, NX5
works with both total-etch and
self-etch protocols, adding to the
distinctiveness of the product.)
Per manufacturer directions, OptiBond Solo® Plus (Kerr) was
brushed onto the tooth sur-
faces for 15 seconds (Figure 6),
air-thinned for 3 seconds, and
cured for 10 seconds using the
L.E. Demetron II curing light
(kerry) (Figures 7 and 8).

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