Placing some type of bone graft or augmentation material into extraction sockets is rapidly approaching “standard of care” status according to Dr. Jon Suzuki, director of the graduate periodontics program at Temple University School of Dentistry.

The emergence of implant dentistry as treatment of choice is undeniable and along with this movement the preservation and augmentation of the alveolar ridge by bone grafting or other methods will be critical for success.

Bone grafting has a long history. The first known attempt was performed by a Dutch surgeon in 1688. Bone grafting has gained much momentum along the way, being surpassed only by blood transfusions as the most transplanted human tissue. I will attempt to give an overview of the current state of bone grafting or bone augmentation.

There are several different bone graft procedures available today. The “autogenous” graft is considered the gold standard of grafts because it utilizes the patient’s own bone. Bone is typically harvested from the patient’s hip or palate.

Despite the predictability of using one’s own bone, the need for a second surgical site is a disadvantage. The “allograft” also utilizes human bone but in this case the bone is collected from a person other than the patient, usually a cadaver. Although it is uncommon, there is a small risk of disease transmission especially if the source of the allograft is not well monitored.

There are some other, less popular graft materials on the market also. These are typically synthetic materials that either act as artificial bone or act as a framework for bone to grow into at its normal rate. Products that behave like this are considered to be

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Here is a case where No. 12 was extracted and Foundation was placed for a future implant.
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“osteocductive.” Products that stimulate bone to grow in at a faster rate are termed “osteocductive.” These products usually have an additional ingredient like a “BMP,” or Bone Morphogenetic Protein or some type of Growth Factor (GF) that cause bone cells to grow at a faster rate.

J. Morita USA, Inc. introduced a new bone augmentation product in February of 2006 and it provides an easy, economical, and efficacious method of maintaining and/or augmenting bone growth in the extraction socket. The product is called Foundation. The FDA has issued a 510(k) clearance for the sale and distribution of the product. It has also been recently approved for sale by Health Canada. The FDA has indicated Foundation for use as follows:

“The Foundation device is a collagen-based bone filling augmentation material for use in the filling of extraction sockets.”

Foundation is a unique material based on the following features:

• made from bovine atelo-collagen which minimizes antigenicity
• cross-linked to achieve biocompatibility
• stimulates new bone growth at an accelerated rate without BMPs or GFs
• a solid, bullet shaped plug for easy placement into the socket
• no need to use multiple materials or membranes
• has been used in Japan since 1998 with great clinical success

The bovine collagen is taken from skin only which is considered no risk for BSE by the EMEA, FDA, and USDA. The majority of the collagen is made into a framework or scaffolding for the bone to grow into. The rest of the collagen is treated in a way that stimulates bone growth cells to be drawn to it. This quality is known as “chemotaxis.” All the collagen is then joined back together and formed into a solid, bullet-shaped plug for easy placement into the extraction socket. Foundation comes in two sizes, small (8mm x 25 mm) and medium (15mm x 25 mm).

Atelocollagen has long been used to repair skin, cartilage, and bone in other parts of the body. It is also finding to be useful in gene therapy and was used as a carrier to bring RNA’s to their target cells in a gene therapy project that won this year’s Nobel Prize in Medicine.

There are many products that can assist the dentist with socket preservation. Care should be taken to evaluate products that actually stimulate new bone growth and those that do not. Socket preservation or alveolar ridge augmentation will definitely be a key to future practice of implant dentistry so continued research into these products is very important.

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OSAP plans infection symposium in N.C.

The Organization for Safety and Asepsis Procedures’s 2007 infection-prevention symposium, “Racing Toward a Safer Future,” will take place May 31-June 3 at the Charlotte Westin Hotel in Charlotte, N.C.

The leading experts on infection control and occupational health and safety will share information of critical concern to dental professionals and others involved in dentistry. The agenda includes networking time and social events, such as the “Surprising Fun Charity Auction, which will feature an astonishing array of vacation packages, gourmet baskets, artwork, apparel, jewelry, literary and sporting goods, and much more. Twenty-two hours of CE credit are available.

The 2007 OSAP Symposium will give attendees the opportunity to learn about dental and infection control trends, find out how to set up infection control programs at their own facilities, and understand how to increase compliance. Internationally-known experts will discuss the latest developments regarding key dental infection prevention and safety issues worldwide, infectious diseases and their impact on systemic health, training tools and techniques, and current developments such as salivary diagnostics.

The OSAP Symposium is designed for infection control and safety in- structors, lecturers, authors, and con- sultants; researchers; dentists; hygien- ists; assistants; lab technicians; nurses in dental clinics; and dental sales and marketing personnel. A brochure is now available that contains details on the Symposium as well as a reserva- tion form. It is available online at www.OSAP.org or can be requested by calling 800.298.OSAP (6727).

OSAP is the Organization for Safety and Asepsis Procedures. Founded in 1984, the non-profit association is dentistry’s premier resource for in- fection control and safety information. Through its publications, courses, Web site, and worldwide collabora- tions, OSAP and the tax-exempt OSAP Foundation support education, research, service, and policy develop- ment to promote safety and the control of infectious diseases in den- tal healthcare settings worldwide.