
HISTORY OF DENTAL IMPLANTS

Reference by permission:

"The History of Implant Dentistry" by Drs. Jaime L. Lozada & Charles J. Goodacre - Professors of Loma Linda University

Methods of replacing missing teeth

As a result of disease related tooth loss and the value placed upon teeth, there has been a continual search for methods by which missing teeth could be replaced.

Early artificial replacements were made from natural teeth and a variety of substitute materials. The replacements were attached to adjacent teeth using thread, wire, and metal bands.

The Phoenicians, early inhabitants of modern day Lebanon, were contemporaries of the Egyptians and Hebrews. They attached "ivory teeth" to adjacent natural teeth using gold wire.

The Etruscans, from the central hills of Italy, were influenced by the Egyptian and Phoenician civilizations. They made gold bands to surround natural teeth between 1000 and 200 B.C. to which they attached replacement teeth that were carved from calves teeth or the teeth of oxen. The "pontics" were riveted to the gold band.

Replantation/Transplantation

The Arabian surgeon, Albucasis (936-1013), is the first person to provide a written description of the replantation process that preceded the concept of transplantation.

Allotransplantation of a tooth from one person to another was an early method by which lost teeth were replaced. Archeological discoveries indicate that many ancient civilizations practiced allogenic tooth transplantation. In 1561, Ambrose Pare (1517-1592) reported that decayed teeth could be replaced by using extracted teeth from another individual and is credited with being the first to mention transplantation.

Tooth transplantation became a means by which the wealthy acquired teeth from the poor. [4] English newspapers frequently published advertisements that offered 2-3 pounds for each perfect central and lateral incisor. [5] The following advertisement appeared in New York papers in 1772: "Teeth - any person willing to dispose of his front teeth may hear of a purchaser by applying to number 28 Maiden Lane for which a generous price will be given. N.B. four guineas will be paid for every tooth."

Pierre Fauchard (1678-1768), in his epic work "The Surgeon-Dentist; or, Treatise on the Teeth," discussed transplantation of teeth from one person to another. An Englishman, John Hunter, was a strong proponent of tooth transplantation. He described the regeneration of blood vessels in a tooth's pulp and periodontal ligament when the transplant tooth was placed into a cock's comb. Teeth were preserved in the cock's comb in the absence of refrigeration and other methods of preservation. Hunter introduced a technique where the teeth were extracted, boiled, and replanted.

In the 1950's, autotransplantation began to appear in the dental literature. After the extraction of a nonrestorable first molar, an impacted developing third molar was transplanted into the position of the first molar. A success rate of about 50% was experienced at that time and the process disappeared. [9] Recently, autotransplantation has resurfaced as a treatment modality with an increased success rate.

Dental Implants

Evidence of tooth replacement in the Americas was found in 1931 while Dr. and Mrs. Wilson Popenoe, an archeological team, were excavating in Honduras. They discovered a mandible of Mayan origin from about 600 AD that had tooth-shaped pieces of shells placed into the sockets of three missing mandibular incisors. The tooth-shaped shell implants and the jaw were examined radiographically and it was determined that compact bone had formed around 2 of the implants and the bone was radiographically similar to that which forms around blade implants. This may be the earliest example of any endosseous implant.

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"Dental Implant Devices, Surfaces, and Advancing Surface Modification of Implants"

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