University of Pennsylvania Health System

Penn Oral and Maxillofacial Surgery

Clinical Briefing™

TMJ and Facial Pain Clinic

Prosthetic Replacement for Temporomandibular Joint Degeneration

The Penn TMJ and Facial Pain Clinic is one of a few centers nationwide offering the Lorenz Total TMJ Replacement System prosthesis for functional reconstruction of the temporomandibular joint in patients with severe late-stage degeneration of the disc and condyle who are refractory to conservative treatment, arthro-scopy and arthroplasty.

Developed by clinic co-director Peter D. Quinn, DMD, MD, the Total TMJ Replacement System was approved by the FDA after a ten-year clinical trial, and is currently the only FDA-approved stock prosthesis (see reverse for indications). Advantages of the Lorenz prosthesis over autogenous grafts include its capacity to discourage heterotopic bone formation, obviating the need for rib or hip grafting, and the opportunity to correct a pre-existing malocclusion. In the clinical study population, the average patient had five previous surgeries, with some undergoing as many as 29 previous surgical procedures.

"The Lorenz prosthesis allows patients with advanced TMJ deterioration to have improved function with greatly reduced pain."

Peter D. Quinn, DMD, MD
Schoenleber Professor and Chairman of Oral and Maxillofacial Surgery

Case Study

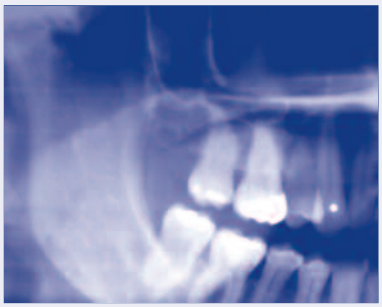


Figure 1

Figure 2

Mrs. T, a 43-year-old-woman, presented with a history of facial trauma secondary to an automobile accident 12 years earlier. She sustained a right subcondylar fracture with displacement of the condyle out of the fossa. At the time, she was treated conservatively with inter-maxillary fixation. Based on her current CT scan, however, she had malunion of the right condyle. She complained of limited opening, jaw locking, functionally-exacerbated right-sided preauricular pain and headache, and a "change in her occlusion." She was treated for several years with intraoral acrylic splints to "unload" the joint and went through numerous courses of physical therapy and medical therapy, including non-steroidal anti-inflammatory medications and muscle relaxants.

On presentation to the TMJ and Facial Pain Clinic, Mrs. T had evidence of advanced traumatic osteoarthritis of the right temporomandibular joint (Figure 1). She had a limited interincisal opening of 21mm (45 to 50mm normal) and her CT scan showed gross deformity of the right condylar head.

In a procedure approximately three hours in length, she underwent total alloplastic replacement of the temporomandibular joint (Figure 2). She is now completely recuperated and functioning without the need for daily narcotic pain medications.

Our Team of Faculty

The Penn Department of Oral and Maxillofacial Surgery is comprised of a multidisciplinary team of dental/medical specialists whose expertise encompasses non-surgical and surgical treatment of oral and maxillofacial disorders, traumatic injuries, congenital defects, oral lesions and temporomandibular joint dysfunction.

Peter D. Quinn, DMD, MD
Chair, Department of Oral and Maxillofacial Surgery; Schoenleber Chair and Professor of Oral and Maxillofacial Surgery and Pharmacology, School of Dental Medicine

Lawrence M. Levin, DMD, MD
Associate Professor of Oral and Maxillofacial Surgery

Lee R. Carrasco, DDS, MD
Assistant Professor of Oral and Maxillofacial Surgery

Joli Chou, DMD, MD
Instructor, Oral and Maxillofacial Surgery

Joseph W. Foote, DMD, MD
Clinical Associate Professor of Oral and Maxillofacial Surgery

Helen Giannakopoulos, DDS, MD
Assistant Professor of Oral and Maxillofacial Surgery

Barry H. Hendler, DDS, MD
Associate Professor of Oral and Maxillofacial Surgery

David C. Stanton, DMD, MD
Associate Professor of Oral and Maxillofacial Surgery

Oral and Maxillofacial Rehabilitation

Periodontics

Jonathan Korostoff, DMD, PhD
Associate Professor of Periodontics

Najeed Saleh, DMD
Clinical Associate Professor of Restorative Dentistry

Maxillofacial Prosthodontics

Kendra S. Schaefer, DMD
Maxillofacial Prosthodontist

Oral Medicine

Martin S. Greenberg, DDS
Professor of Oral Medicine

Thomas P. Sollecito, DMD
Professor and Chair of Oral Medicine

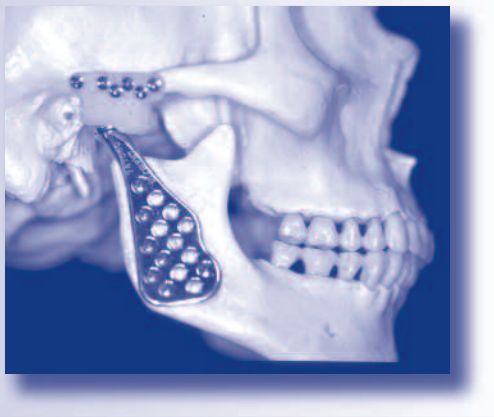
Eric T. Stoopler, DMD
Assistant Professor of Oral Medicine

Access

Patient appointments are available at:

Department of Oral and Maxillofacial Surgery

Hospital of the University of Pennsylvania
5 White Building
3400 Spruce Street
Philadelphia, PA 19104



Total Temporomandibular Joint (TMJ) Replacement System

Developed by Dr. Peter D. Quinn of the Penn Department of Oral and Maxillofacial Surgery, the Total TMJ Replacement System (Walter Lorenz Surgical, Inc.) was the first stock device of its type approved by the FDA for the functional reconstruction of diseased and/or damaged jaw joints. The prosthesis (shown above) consists of two components (mandibular condyle and glenoid fossa) that are available as right- and left-side specific designs in multiple sizes.

Approved indications for the TMJ prosthesis include arthritic conditions such as osteoarthritis, traumatic arthritis, or rheumatoid arthritis; ankylosis including but not limited to recurrent ankylosis with excessive heterotopic bone formation; and revision procedures in which other treatments have failed (eg, alloplastic reconstruction, autogenous grafts).

To refer a patient and/or consult with a doctor call 800.789.PENN (7366) or visit pennhealth.com/referral.

University of Pennsylvania Health System
Hospital of the University of Pennsylvania
Penn Presbyterian Medical Center
Pennsylvania Hospital
WE ARE MEDICINE.
800.789.PENN pennhealth.com

TMJ0408