Prospective Prosthodontics and its implications

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ABSTRACT

Prosthodontics is concerned with the impact of tooth or tissue damage and partial or complete loss of teeth on oral function in its broadest sense. It deals with this largely through prosthetic replacement. The discipline occupies a major portion of a dental school curriculum, and dental practitioners usually devote much of their practice to prosthodontic services. With the rapid improvement in oral health and the reduction of edentulism in many countries, increasing numbers of people are retaining more teeth later in life. Gradually, the main focus in prosthodontics has shifted from removable dentures to fixed prostheses, while implant-supported restorations have attracted intense interest in the dental community. Another factor increasingly influencing prosthodontic practice is patients' awareness of newer technologies in aesthetic dentistry. Because prosthodontic interventions as well as maintenance and repair are by nature costly, the global development in the field manifests fundamental inequalities in the levels of service that patients can access. Diminishing resources for health care in general challenges educators and practitioners of prosthodontics alike. This review is an attempt to describe the recent developments in prosthodontics and its therapeutic areas, and the impact such developments may have on the theory and practice of the discipline.

Prosthodontists are experts in the restoration and replacement of teeth - they make smiles look beautiful and function the way they should. After completing four years of dental school, Prosthodontists receive an extra three years of specialized training in an American Dental Association (ADA) accredited graduate program. Prosthodontics is one of the nine dental specialties recognized by the ADA.

Many like to think of Prosthodontists as the “quarterback” of a dental treatment plan. They regularly lead teams of general dentists, specialists, and other health professionals to develop solutions for your dental needs.

Keywords: dentists, specialists, Prosthodontics.

INTRODUCTION

It is also known as dental prosthetics or prosthetic dentistry, is the area of dentistry that focuses on dental prostheses. It one of nine dental specialties recognized by the American Dental Association (ADA), Royal College of Dentists of Canada, and Royal Australasian College of Dental Surgeons. The ADA defines it as "the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation and maintenance of the oral function, comfort, appearance and health of patients with clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitutes."

Replacing Lost Teeth

Loss of natural teeth, whether in an accident or as part of the aging process, can be traumatic and affect your outlook on life. Simple pleasures - like smiling or going out to eat - become a source of stress or embarrassment. With the help of a prosthodontist, there are many options, if you have lost some or all your teeth.

Crowns, bridges, and full or partial dentures are just some of the procedures that can help you regain your smile and improve your appearance and self confidence.

Another option is dental implants, a more permanent solution that has improved greatly over the last ten years, thanks to the pioneering techniques of prosthodontists.

Whether you need to replace one tooth or many, a prosthodontist will work with you through every step of dental implant treatment, from an initial consultation through follow-up care.
Complex Care Management

Prosthodontists are trained to manage the most complex dental restorations. From patients requiring rehabilitation after a traumatic injury to creating new smiles for those born with genetic facial deficits, prosthodontists have the special skills needed to restore smiles to the best they can be.

Cosmetic / Esthetic Dentistry

A healthy smile has a significant impact on self-esteem. If you are like many Americans and are unhappy about the "look" of your smile, you may want to consult a prosthodontist.

With their advanced training, prosthodontists can improve your appearance by fixing broken, discolored or misshapen teeth and associated structures. Some of the procedures that can improve your smile are:

- Placing complete ceramic esthetic crowns or "caps" onto teeth
- Placing veneers onto teeth to conceal defects
- Using bonding technology on a tooth's surface to change its shape or to close unwanted gaps
- Bleaching discolored teeth to brighten and whiten a smile.

THE BENEFITS OF GOING TO A "PRO"

If anybody seeking cosmetic or reconstructive dental work, he should do research before making a decision in order to ensure proper care. As ADA recognized specialists, prosthodontists are qualified to offer care in state-of-the-art procedures and techniques, such as:

- Dental implants
- Cosmetic dentistry
- Complex care management involving multiple specialists
- Complete and removable partial dentures
- Replacing lost teeth
- Special needs of geriatric patients
- Children born with cleft palate or missing teeth
- Temporomandibular joint syndrome/disorder
- Traumatic injuries
- Snoring and sleep disorders
- Maxillofacial prosthetic procedures such as oral cancer reconstruction and continuing care
- Rigorous training and experience provide prosthodontists with a special understanding of the dynamics of a smile, the preservation of a healthy mouth, and the creation of tooth replacement.

COMPUTER TECHNOLOGY IN THE PROSTHODONTIC PRACTICE

Prosthodontics is that the dental specialty that treats patients with missing or deficient teeth and/or oral and external body part tissues. Optimum oral health and esthetics are obtained for patients through the utilization of dental implants, dentures, veneers, crowns and teeth lightening. Through identification, treatment designing, rehabilitation and maintenance, a tooth doctor will improve the oral operate, comfort, look and health of a patient. The continuing improvement of pc based mostly clinical hardware and package applications has enabled the computer-based dental medicine follow model. These days dental medicine graduates are victimization electronic records, having ne'er utilised a physical chart or film based mostly radiographs. Newer capabilities like 3D digital diagnostic imaging, implant designing package and pc generated surgical guides empower prosthodontists to determine themselves as effective leaders providing optimum treatment solutions for each straightforward and sophisticated restorative protocols. Though the advantages ar recognized, several clinicians avoid incorporating engineering into their practices. Some transition cautiously into the digital realm so as to learn from the benefits that newer technology guarantees. They’re characterised by the degree of digital integration into the patient care setting starting from no pc integration to utterly paperless/chartless. This alteration isn't straightforward for many dentists and a worker as a result of it involves a cultural shift.
Identification, Evaluation, and Infrastructure

In order to introduce new technology to a practice, it is necessary that a thorough evaluation and testing of the proposed new application takes place prior to being introduced into the practice. The application must be installed and tested and key members of the staff must be trained and accountable for the training of other staff members. Additionally, once the decision is made to introduce the digital process, occasionally hardware upgrades will be required. It is necessary to install a robust and secure network infrastructure. This includes a file server, hard drive backups, an uninterruptable power source, and a stable hardwired network based upon a high-speed gigabyte switch. Clinical workstations monitors must be large enough to provide effective visual access to two programs simultaneously. A 22’ inch wide flat panel LED monitor on a movable arm is now considered a minimum recommended configuration. In order to achieve an ergonomic viewing position of the screen, it must be adjustable and movable for visual access to the patient, dentist and staff member when seated or standing during consultation or examination. Once the digital infrastructure is in place, one is in a position to incorporate the clinical software application that best fits your practice’s needs. It is best to make the decisions in manageable steps that allow for an effective roll out of the new software or process.

**Fig. 1:** Fixed versus removable prostheses

- **a.** The classic fixed restoration is permanently cemented onto conically prepared abutment teeth.
- **b.** Removable prostheses derive their support from bases and flanges. They are stabilized by clasps on the remaining dental arch segments.

**PERSPECTIVES AND IMPLICATIONS IN PROSTHODONTICS**

Enhanced prosthetic device retention and stability are known as maybe the foremost vital factors for manufacturing additional favorable jaw IOD treatment outcome and improved patient satisfaction. Jaw IOD prosthetic device retention, stability, and support area unit provided by each the membrane and implants. As increasing numbers of implants area unit used, it's attainable they'll assume a bigger role with treatment outcome, notably involving prosthetic device support. However, additional implants might not translate to improved prosthetic device retention and/or stability, and subsequent treatment outcome may be relatively unaltered, other than a slight increased risk from additional treatment and added expense.

Prosthodontic management of patients experiencing compromise/loss of facial anatomy resulting from surgical resection of tumors, trauma, or congenital anomalies represents a challenging area of rehabilitation from a functional,
esthetic and psychological perspective. Attempts to replace missing facial structures date back as far as two thousand years ago based on anecdotal reports, historical records, and archeological findings. More recently adhesive and or mechanically retained extra-oral prostheses were considered the standard of care. However, surveys of patients so treated noted that retention or lack thereof was the rate limiting step for their acceptance of such treatment.

Compared with the traditional model of care, EBD is relatively new and, with progress in time, multiple clinical questions for which currently there is weak evidence or Bidra minimal/insufficient evidence should be resolved. Long-term survival and success of treatment, core components of the specialty of prosthodontics, is an important arena for channeling efforts and resources to help further distinguish the specialty of prosthodontics. To facilitate this process, however, it is important to establish a consensus in prosthodontics on defining the 3 core elements previously described: defining prosthodontic outcomes, duration needed for a meaningful understanding of prosthodontic outcomes, and sample size needed to make meaningful conclusions.

Because prosthodontics is a unique specialty, a consensus is necessary to establish explicit guidelines for reporting of prosthodontic outcomes (suggested acronym, GROPO). Similar to numerous guidelines described in medicine, these guidelines can be exclusive to prosthodontics and ensure that investigators provide standardized reporting of their studies in order for them to be clear, complete, and transparent and allow integration of their evidence into clinical practice. In order to teach and understand evidence-based prosthodontics, clinicians need to attain new skills pertaining to computer-based knowledge systems. These skills are necessary for asking, acquiring, appraising, applying, and assessing scientific evidence for the pertinent clinical situation. Current popular resources include Web sites of PubMed/Medline, ADA Center for EBD, Cochrane Library, and Center for Evidence-Based medical specialty.

These clinical studies, conducted in collaborating dental offices with willing patients, facilitate expand the profession’s proof base and additional refine care, maybe a PBRN targeted on dentistry and/or prosthodontists are often assembled within the close to future which will offer answers to specific clinical queries chosen by the specialty and for the specialty of dentistry

Ceramic materials and ceramic restorative systems are unceasingly evolving, and particularly over the last twenty years they need created a major impact on patient care within the dental medicine observe. These materials were bit by bit incorporated for many clinical indications like ceramic laminate veneers (CLVs), ceramic onlays and inlays, ceramic crowns, ceramic fastened partial dentures (FPDs), and ceramic implant abutments and ceramic screw-retained implant frameworks.

Conventional dental therapies are increased or replaced with new materials and technologies that a decade ago were largely a dream or at the best, still on the drafting table. each side of dental medicine medical specialty has been affected, from raised potency and accuracy chair facet and within the laboratory to high- strength, long-lasting, aesthetically pleasing prostheses that meet ever- intensifying patient demands.

An important distinction between medical and dental models of care is that the level of management a patient has concerning however, when, whether or not it's even necessary to treat a dental condition, this can be very true within the discipline of dentistry. Dentistry could be a distinctive dental specialty that encompasses art, philosophy, and science and includes reversible and irreversible treatments. Therefore, associate degree absolute extrapolation of evidence-based ideas from medication to dentistry isn't attainable. Treatment outcomes, that area unit a core component of dentistry, however, render themselves well for application of principles of EBD. There area unit three predominant things that area unit vital to understanding challenges in news treatment outcomes in dentistry

The benefits of implant-retained/ supported jaw implant overdenture (IOD) treatment relative to standard jaw dental plate treatment are well documented. 1-9 1/2 all standard jaw dentures demonstrate issues with prosthetic device stability and retention, with retention being the only most significant deficiency reportable.

**CONCLUSION**

It is intended to guide the prospective practitioner towards a scholarly approach to clinical problems. As such, it deals with the principal concepts and clinical steps of fixed prosthodontics

All Maxillofacial prosthodontists are prosthodontists first and then attain a fellowship training exclusively in Maxillofacial prosthetics that includes oral surgical and prosthodontic treatments. Maxillofacial prosthodontists treat patients who have acquired and congenital defects of the head and neck region due to cancer, surgery, trauma, and/or birth defects. Maxillary obturators, speech-aid prosthesis (formerly called as Pharyngeal/soft palate obturators) and mandibular-resection prostheses are the most common prostheses planned and fabricated by Maxillofacial prosthodontists. Other types of prostheses include artificial eyes, nose and other facial prostheses fabricated in conjunction with an anaplastologist.
Treatment is multidisciplinary, involving oral and maxillofacial surgeons, plastic surgeons, head and neck surgeons, ENT doctors, oncologists, speech therapists, occupational therapists, physiotherapists, and other healthcare professionals.

REFERENCES