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Opinion Article

Exploring Periodontics specialty: A Vision for the Future (Opinion)

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Abstract

Periodontics is a dynamic profession characterized by complex treatment planning and a diverse spectrum of treatment modalities ranging from traditional to novel treatments. It is a separate branch of dentistry that allows for both tooth preservation and effective implant-based tooth replacement. The future of periodontics is promising and exciting, but it is unlikely to happen without major effort and obstacles.

The purpose of this article is to provide an overview of periodontics specialty and prospects.

Keywords: Periodontics; Specialty; Career; Challenges

Introduction

Periodontists are dentists who specialize in the diagnosis and treatment of periodontal diseases teeth and placement of dental implants [1].

Additionally, periodontists do thorough clinical examinations, measuring periodontal pockets' depths and checking for gingival bleeding. They may also conduct testing to determine the precise bacterial species causing the problem. Periodontal surgery could be necessary in cases with periodontitis that are more severe. Some periodontists can also put dental implants to replace missing teeth.

Scaling, or the meticulous removal of dental and calculus, and thorough root planing entails scraping diseased cementum from root surfaces are still essential facets of periodontal therapy. Patients start the maintenance phase of therapy once their

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periodontal disease has been managed and return every few months for scaling and root planing. Antibiotics are frequently recommended by periodontists to get rid of pathogens in periodontal pockets [2,3].

Background data suggested that up to 20–25% of periodontitis patients continued to show disease progression while receiving the recommended treatment and maintenance care. Furthermore, historical data shows that, despite a significant accumulation of bacteria on teeth, periodontitis severity and development tend to follow one of two or three distinct courses, with the vast majority of cases being mild to moderate [4].

These unexpected findings on the course of periodontitis, which were unrelated to levels of dental hygiene, also revealed that 8–10% of people in the general population had severe generalized periodontitis [5].

Additionally, all periodontists are aware that mild to moderate periodontitis can develop in people with inappropriate plaque control and inadequate dental treatment.

Although there are many obstacles and challenges ahead, the future of the profession and the area of periodontology seems promising and gratifying.

Different therapeutic modalities in Periodontics

Controlling the microbial challenge and host attributes that cause microbial dysbiosis and breakdown of tissues remain the fundamental tenets of periodontal treatment to arrest the onset and development of periodontitis. Periodontology has seen a significant transformation in recent years. A high degree of proficiency has grown in the regeneration of the bone and connective tissues that support the teeth in order to maintain teeth in a functioning and comfortable state. In addition to maxillofacial surgeons, periodontists are now one of the main specialties worldwide practicing implant surgery [6].

Although the need for periodontists is projected to stay relatively stable, the operations they conduct may vary over time. People who have more teeth and live longer have a higher risk of periodontal disease. The influence of periodontal infections on systemic health, both directly and indirectly, is being supported by a growing corpus of research. People may be more motivated to seek regular periodontal treatment if they are aware of the likely connections between chronic periodontal infection and certain systemic diseases, which have been revealed by epidemiological, clinical, and experimental studies. Bacteremia or inflammation caused by periodontal disease is frequently overlooked in relation to systemic disease [7].

Periodontology is already being integrated with other dental specialties, mostly in concentrated applications by individual periodontists with specialized expertise. An illustration of this is the tight collaboration between periodontists and orthodontists to improve the pace and stability of adult teeth moving. To help the orthodontist regulate the patient's tooth movement, periodontists assist in treatment planning in such challenging instances by leveraging their knowledge of tools like cone beam computed tomography and surgical techniques such as alveolar corticotomy and augmentation. The tremendous innovations of periodontists, which resulted in predictable periodontal treatment outcomes for the majority of patients,

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created a dramatically different marketplace in which many patients with periodontitis can and have been treated to a good end-point in many cases by general dentists and dental hygienists. Of course, one might argue that the significant breakthrough for treating patients with moderate-to-severe periodontitis was osseointegrated dental implants. Implant innovation has substituted the competent use of periodontitis therapy approaches targeting at tooth preservation for many periodontists [6].

In order to create new bone, periodontists can surgically place bone-regenerating materials into regions of bone loss. The term "guided tissue regeneration" refers to this procedure. Tooth loss may happen if periodontal disease is not treated or treated unsuccessfully. Dental implants are artificial teeth that are surgically placed into the jawbone by periodontists and other dentists. Dental implants are constructed of materials that are compatible with human tissue. Periodontists can also conduct aesthetic operations, such adjusting the contours of the gums to provide patients with "gummy" smiles the appearance of longer teeth. Owners of their own businesses are responsible for hiring, training, and managing workers, including administrative assistants and dental hygienists [8].

History of the Career of Periodontics

Periodontal disease and its treatment have long been understood, even if the specialty of periodontology just became institutionalized in the early 20th century. The accumulation of calculus, or tartar, was long believed to be the cause of periodontal disease. Periodontal diseases and treatments were known to many ancient cultures.

W. Riggs could possibly be regarded as the first periodontics specialist because it appears that he was the first to specialize in this field. The rapid development in the field of periodontology is due to all those pioneers who were the illustrious gurus who paved the way for later generations to reach the profession's present prestigious status [9,10].

G.V. Black2 highlighted the relevance of periodontal treatment in 1886 when he emphasized the importance of removing "deposits" from the teeth to cure inflammation in the "peridental membrane. Irving Glickman stressed the need of eliminating all probable causes of periodontal disease in all patients in 1964 [11,12].

Career options in the specialty of Periodontics

Career options in periodontics are numerous and diverse, allowing a periodontist to live a professionally fulfilling and secure lifestyle. These options may include working in clinical practice in periodontics, which includes a variety of practice settings such as general private practice or specialty practice in dental clinics, polyclinics, and multispecialty hospital settings.

Second, a periodontist is qualified for numerous government professions, allowing for a soothing and secure work environment. Additionally, an academic profession includes teaching undergraduate and postgraduate students at government and private dental institutions. People will rise through numerous stages in their academic careers, from assistant professor to full-time chair, and this may be a satisfying and fulfilling sensation.

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Moreover, the principles of the past are always being revised, and new concepts are being planned, in periodontal research. As a component of the postgraduate program, periodontics research is given its initial thrust. Numerous local, national, and worldwide organizations offer support in this area as well as funding to advance a career in research. Governmental organizations, academic institutions, and private company research institutes all provide careers and training in this field [13].

Challenge in Periodontics Career

Finding employment for everyone is becoming more and more of a struggle as more postgraduate periodontists graduate each year. Financial inadequacy is another significant hurdle that makes it difficult for a periodontist to open their own clinic or purchase the necessary equipment [14].

AAP estimates that by the time they complete their residencies, today's periodontology graduates will have amassed approximately $500,000 in student loan debt. Despite a student's passion for teaching and research, this enormous debt makes the decision to pursue an academic career particularly difficult. To help students overcome this problem, the AAP Foundation donates nearly $500,000 annually to support periodontal education and reduce the costs of student debt.

The AAP Foundation is guaranteeing that future periodontists are taught by periodontists by drawing and keeping the smartest and brightest students who are dedicated to a career in academia. The group is working to ensure that dentists of the future know when to send patients and that there will always be a sufficient supply of periodontists. It is also ensuring that periodontology stays at the forefront of dental research. The advancements made today by AAP Foundation researchers will have an effect on periodontology practice tomorrow. These researchers are always learning new things, and this information illuminates even more unexplored territory [9].

Since they only receive manual scaling as clinical experience during their undergraduate years, it is despairing that the majority of undergraduate students think periodontics is monotonous and boring. They seldom get the chance to see or participate in difficult periodontal surgical operations, and they frequently lack knowledge of multidisciplinary periodontics. As a result, there isn't much reason to choose periodontics as a postgraduate specialty, to begin with [15].

Peter K. Chang et al. performed a study to learn how periodontists identify their specialty and how non-periodontists, general dentists, and hygienists figure out it. The universal consensus is that the most significant element of periodontists is surgically treating advanced gum and bone diseases [16]. To highlight the significance and the many facets of this specialty and to dispel the notion that periodontics is limited to scaling and root planing procedures, orientation and raising awareness about the specialty are essential, especially at the undergraduate level and during internship programs.

Remarks

Periodontics is a dynamic profession with complex treatment planning and a wide range of treatment techniques ranging from traditional to innovative procedures. It is a broad specialty that offers chances in academia and clinical practice that is evidence-based and driven by good

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scientific knowledge, opening the path for additional research horizons. A wide range of surgical techniques and technology are used in the area of periodontics today to repair predicted injured tissues and handle intricate multidisciplinary procedures that may in some way affect the tissues that support tooth and implants. A major independent function for periodontitis in a number of systemic diseases has also been demonstrated by periodontal researchers who have demonstrated that moderate-to-severe periodontitis increases the systemic inflammatory load and transient bacteremias [6].

Future Prospective

The idea that periodontal inflammation and the periodontal microbiota contribute to the total burden of inflammation at the systemic level, which affects the incidence, severity, and development of many other chronic inflammatory disorders, is central to the philosophy of periodontal medicine. This idea allows periodontitis to be seen as an independent factor in the initiation, development, and consequences of several chronic inflammatory disorders, as well as premature deliveries [17].

With very few exceptions, we have few objective biomarkers of disease outcomes and incredibly few databases. The dedication of the specialty to gathering data on periodontics' benefits to patients and the healthcare system may be at the heart of this next stage for the profession.

Furthermore, the intriguing field of periodontal tissue engineering, which incorporates and encompasses the ideas of molecular biology, stem cell biology, nanotechnology, and genetic engineering, is now being developed to address the limitations of traditional periodontal therapy. This necessitates a plethora of information and staff, as well as the requisite funds, to accomplish the research standards required for success in the sector. The significance of a periodontist in translating these principles from theory to therapy is highlighted here, hence extending periodontists' potential in these associated disciplines [13].

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