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Additional Orally Transmitted Aphorisms (OTA's-3) in Dentistry

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Abstract

Orally Transmitted Aphorisms (OTAs) are often prevalent without evidence and can also be aimed at Dental Health Care Workers or their patients. Aim: Reported here are additional OTAs: (1) When it comes to Osseo integrated implants, the bottom line is to "Grow Bone; The rest is mechanical. (2) Keep accurate written records of every appointment; they can save your skin. (3) Don't sleep with your dentures in place. (4) Don't throw out old radiographs in the practice. (5) Show up the plaque to remove it. (6) Don't forget to floss daily. Discussion: "Evidence-Based-Dentistry" and *"Absence of evidence is not evidence of absence," are appraised*. Conclusion: OTAs are part of successful dentistry, and additional new OTAs will resolve as new vistas of dentistry evolve.

Keywords: aphorisms; antibiotics; cosmetic; dentistry; floss; oral; treatment; teaching; transgenerational; wisdom

Introduction

Provenance and Background

Bio medical sciences are the fundamental principles that guide the practice of Medicine. Dentistry as a sub-specialty of Medicine, manages growth and any acquired oral pathology embracing both hard and soft tissues. Accordingly modern dentists are expected to deal with all aspects relating not only to the oral cavity, but also the head and neck, and as how they impact the entire human body and also human behavior. Clinical experience, gained from centuries of sharp observation and critical intelligence, reasoning and understanding has evolved into refined wisdom relating to diagnostic skills. Oral health care workers (OHCWs) learn many of these principles during their undergraduate training, and after qualifying will apply these in daily practice. Many guiding principles are transmitted orally, and are mostly derived and refined from evidence-based research but buried in the vast biomedical refereed literature. These wise experiential interpretations and foundational principles, may be lost if not codified for future generations. Previous dental pragmatic experience in clinical practice by practicing dental health care workers over centuries, has yielded principles that dictate the modern practice of dentistry. Some of these of these oral advisories have been recorded previously as Orally Transmitted Aphorisms (OTA's) [1,2]. Most of the OTA's are targeted at Oral Health Care Workers (OHCW) for the practice of dentistry, but some may be directed at advice and/or instructions for patients.

Aim

This report lists and discusses additional OTA's, and are aimed at Medical and Oral Health Care Workers (OHCWs) and some of which are for the benefit of patients. (1) When it comes to Osseo integrated implants, the bottom line is to "Grow Bone; The rest is mechanical. (2) Keep accurate written records of every appointment; they can save your skin. (3) Don't sleep with your dentures in place. (4). Don't throw out old radiographs in the practice. (5) Show up the plaque to remove it, (6) Don't forget to floss daily. These are presented to advance and refine clinical acumen by facilitating recollection of principles as OTAs that dictate the practice of dentistry.

Additional Orally Transmitted Aphorisms

When it comes to Osseo integrated implants, the bottom line is to "Grow Bone: The rest is mechanical. Humans have two natural sets of teeth, the first deciduous set (often termed Milk-teeth) which start to erupt after six months of life until the age of four, and then exfoliate from age six until about puberty. As the teeth grow, so too does the bony alveolar part of the jaws to accommodate the underlying developing tooth follicles of the permanent teeth. Usually, a complete set of permanent or adult teeth replace the deciduous teeth. There are thirty-two teeth in a complete set of adult teeth and in health will provide optimal form and function for survival and life. Tooth decay and and/or gum diseases are the main causes for tooth loss [3]. Partial or total edentulism results and treatment is sought with prosthetic replacement.

Successful Osseo-Integrated-Implants (OI) provide fixed anchorage in the Jaws on which prostheses can be sustained. However enough bone must exist into which the implant can be placed. This is frequently assessed using radiography and other dimensional imaging techniques like CAT scans, and MRI as well. Should not enough bone exist, bone supplementation is required to augment enough osseous bulk material to which the implant will bond. This may be achieved with bone grafts before or at the time of placement of the OI. OI will not bond with osseointegration if there is inadequate bone to ensure solid anchorage. Solid receptive vital bone can reliably be grown in and on the alveolus; various methods are available to ensure adequate bone is procured for OI. Subsequent to ensuring adequate healthy, vital bone material is available at the recipient-site, implants can confidently be placed with success. Hence the aphorism: "When it comes to osseo-integrated-implant, grow bone" [4-8]. (2) Keep accurate written records of every appointment; they can save your skin. OHCWs treat patients on a daily basis. Solo dentists in private practice essentially run mini-hospital single handed and have to be well organized to successfully cope with the demand stresses and strains which emanate. To alleviate stress and ensure accurate recall of procedures, it is advisable to record in writing everything that is said and done at every appointment [9,10]. Even in group practices with two or more principals, as well as in institutions, hospitals and clinics, the number of dental appointments per operator easily exceeds human capacity for accurate recall. Consequently, it is incumbent as part of a professional service to record immediately what was done, and advised, by the OHCW in person themselves, as well as any professional fees charged. Dated Medical Histories, medications and allergies, are included and should be updated at each visit. Pre-printed copies of post-operative advisories to patients eliminates ambiguities of instructions. These charts and records are usually kept in a secure confidential file individuated with all pertinent information recorded. These records can be perused and scrutinized before seeing a patient and keeps the OHCW up to date and well informed about their patients. Should complaints arise from dissatisfied patients, for any reason, the patients have the right to report and appeal for help, guidance and resolution of their complaint to Professional Controlling Bodies who ratifies and licenses people to practice as trained OHDWs professionals. Written records of presented treatment plans, cost- quotations for proposed work, therapy, advice, detailed recording of procedures, consultations and payments all provide evidence and proof by OHCW's of what transpired in their operatories and service. It is strongly advisable to have the patients initial and date the copies for quotations for work involving substantial fees above $200 (Two Hundred U$-Dollars in 2023). Patients have the privilege of having "forgetories', and often may apparently agree verbally to treatments, but then innocently misunderstand and act in unfortunate, vindictive reprehensible ways against OHCW's. Third party arbitrators, judges or objective consultants can confidently take firm fair and just decisions when written proof is provided as evidence, and often moderates, mitigates or exonerates OHCWs from misunderstandings for frankly vexatious or frivolous claims against them. Hence this OTA is stressed, learned and diligently applied. "Keep accurate written records of every appointment; they can save your skin." (3) Don't sleep with your dentures in place. For various reasons many folks lose some or all their natural dentition. To improve overall quality of life relating to appearance, function and living, fixed and removable protheses are provided by OHCWs but require sanitary attention to provide healthy long-term service to the recipient patient. This OTA applies especially to those who have full-, or partial-, removable prostheses. Embarrassment arising from being seen with a collapsed face motivates many people to never remove the prostheses, even when sleeping. It is essential to sustain Oral Hygiene at the highest levels of health, and this is achieved easily with partial removable prostheses, allowing unfettered access to the remaining dentition, and by brushing, flossing them and rinsing. with the removable prothesis out of the mouth. The prostheses should be held firmly and scrubbed clean of any oral biofilm. It is advisable to always do this over a basin filled with water, which will act as soft landing to avoid breakage, should the prosthesis slip and fall. If the prosthesis is not removed from the mouth, the remaining supporting tissues tend to allow stagnation of biofilm with consequent unwanted development of caries and gum disease [3]. Many people wear their full prostheses at night during sleep. This allows for stagnation of biofilm under the prosthesis and will induce and allow a low-grade chronic inflammation to develop in the mucosa. This habit in turn over many months may affect bony alveolar ridge resorption with consequent compromise of the secure 'Fit' of the

prosthesis [10-15]. Full prostheses will serve well if kept clean as indicated above, and kept under water at night, usually in a glass of tap-water, to allow the patients oral tissue to revitalize and recover from a days' wear. (4) Don't throw out old radiographs from the practice. Retain them and use them. Often patients don't attend reliably for six monthly or annual appointments for oral examinations, oral-hygiene maintenance, screening, remotivating or check-ups. Because early diagnosis of decay or gum disease strongly moderates treatment choices, using old radiographs for comparisons often highlights subtle changes that facilitate treatment or prevent disasters. Early or recurrent caries can be detected this way, as well as radiographic endodontic changes like a J-lesions on affected teeth, or periodontal changes due to crestal bone loss, developing furcal involvement. Impacted wisdom teeth are often detected after age nine, as the third molars only grow and calcify in the second decade of life. Although occlusal 'Bite-wing' radiographs are important, full mouth peri-apical radiographs and/or a panoramic radiography record most of the bony structures, teeth and sinuses of the skull. Retaine 'old' (meaning radiography dated more than one or more year ago) full mouth radiographs and panoramic radiographs are invaluable when needed to establish or confirm identities of people whose demise obfuscates corporeal identity like that which may occur with unnatural deaths in drowning, fires, transport accidents and war. Suspected persons skulls will be radiographed post mortem, often by coroners, and access to pre-mortem radiography stored in dentists' offices become invaluable for comparisons and positive identification of victims. At least ten points of concordance will have to be established from pre- and post-mortem radiography, to confidently establish identity [16-22]. (5) Show up the plaque to remove it. When you show up the plaque, patients will remove it. It is over half a century since Arnim in 1963, described disclosing solution was used to visually show up biofilm [26]. Since then, use of dyes that are absorbed by sessile microbial plaques on the teeth, and can easily and successfully be applied both professionally by OHCWs, or at home by patients. Professional and home care oral hygiene is optimally executed when the oral biofilm-plaque is exposed. Besides the plaque that cannot be removed from occlusal pits and fissures, stagnating biofilm interdentally and cervically on teeth is the major cause of most dental caries and gum disease. Without the existence of stagnating biofilm, the prevalence of tooth decay, gingivitis and periodontitis will be minimized. Oral hygiene instruction remains the foundation of oral disease prophylaxis. Removing biofilm is facilitated and achieved if the biofilm is highlighted with stain [26,27]. (6) Don't forget to floss daily. This advice is regularly targeted at patients and is a fundamental factor in Oral Hygiene Instruction (OHI) for decades. In spite of the best efforts at removal of biofilm by brushing, besides the occlusal and palatal fissures and pits, the interdental areas are loci where stagnating biofilm starts and encourages progressive caries. Decalcification of tooth material can start within an hour after drinking acid beverages and is the forerunner of erosion, attrition and abrasion. Softened decalcified loci if allowed to stagnate will become infected with microbes, and once cavitation occurs, progressive caries is established. Patients tend to neglect flossing and only brush. Consequently, it is important to remind and remotivate patients that to prevent interproximal caries developing, flossing is a basic and inherent part of OHI [27-31].

Discussion

For decades teaching dentistry often relied on empirical advice, often handed down orally as OTA aphorisms. As research, publication and dispersion of knowledge became more easily available, at the turn of the century (1999->2000) a strong rational movement to teach "Evidence-Based -Dentistry," became more prevalent. The Internet provided easily accessible searches into Research Engines, and centuries of hardcopy published articles became available to academia. Traditional teachings were challenged and unless published evidence was put forward, many sceptics rushed to discredit traditional solid aphorisms and advices. If an aphorism like "floss your teeth daily" could not be proved in the published literature that flossing worked, sceptics would claim it did not work. Excellent Cochrane-Internet cyber-searches are used regularly to substantiate or negate insights and principles of Medicine and Dentistry to support or deny Evidence-based-practices. For example: In 2016 The Mainstream Media used a published Cochrane report to negate the advice about the need for flossing. The New York Times questioned," Feeling guilty about not flossing? No need to worry." Newsweek reaffirmed this because "The Flossing Myth had been shattered." The New York Times and News Week as mass media

communicators have a wide global audience of readers, are part of Mainstream Media, but are not considered major focused sources of Medical Literature [32-35].

The mass media hysteria about shattering the myth about flossing, was the result of a conflating scientific error, inherent in a primary principle that states, "Absence of evidence is not evidence of absence." [33]. Subsequent negation of this faulty interpretation was clearly countered by most leaders, teachers, and professors in academia, as well as practicing OHCWS. Vigorous OHI including flossing has shown highly significant improvements and huge declines in thousands of private dental offices, for the prevalence and incidence of new decay and the prophylaxis of gum disease and tooth decay. The additional aphorisms above state basic principles that determine policies of practice for Oral Health Care Workers (OCHWs). Dentistry is constituted by several established sub-specialties: Preventative Dentistry: Confirmative and Restorative: Prosthodontics; Periodontics; Oral Medicine; Orthodontics; Community dentistry: Oral Pathology; Maxillo-facial Surgery: Maxillo-facial Radiology, Orthognathic surgery, Forensic Dentistry, and Paleo dentistry, as well as complimentary services of Histopathology, Microbiology, Virology, Parasitology, Dental Mechanics and Technical services for processing adjuncts in Dentistry. Ordinates like castings may be produced using computer (like CAD-CAM CEREC) machines generated and/or influenced inlays, overlays and on lays, crowns, bridges, splints, and prostheses [23-24]. Each subspecialty develops its' own guiding principles and future aphorisms will certainly evolve. OCHW's have open access to all the cited subspecialties to maximize their diagnosis, optimize treatment and service, and both inter- and intra-professional communication. Mentoring often involves talking, and after years of experience, intelligent synthesis, incisive criticism, and reduction to a few words…. new aphorisms are born. OTA's may survive generations but can easily be lost or be misunderstood as verbal synthesis and repetition may change or not even be heard. It's not what is said, but what is accurately written down to be correctly understood. Consequently, recording them in refereed publication becomes important. Expensive back-up specialist clinical operatory and supportive machines may force these aforementioned dentistry services to be located in group- practices, and/or may only be available in large clinics or hospitals to increase frequency of use, to amortize the financial outlay and to keep professional fees as low as possible. Practicing Oral Health Care Workers should never assume all is in order or that presenting unusual signs and/or symptoms are all within health limits. Presumption remains the major cause of foul-ups. Monitoring, recording, checking, confirming information and continual observation and vigilance can eliminate undesirable or negative outcomes for practicing dentists.

Conclusion

OTA's have been transferred by mouth through successive progressive generations of OHCWs; OTAs recorded here will be supplemented in future as long as dentistry evolves as a profession producing more pragmatic, evidence-based wisdom among dental health care workers.

Authors statement

The author has no conflict of interests to declare.

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