C3: Opposition to Prophylactic Removal of Third Molars (Wisdom Teeth)

Excessive health care in the United States has been documented by numerous studies. It results in enormous waste of limited funds and harm to millions of people, not excluding death, because even the safest treatment is not without risk.(1) The obvious solution, when effectively applied, is "evidence-based practice," which minimizes unnecessary procedures and reduces costs. The public is already aware that some surgical procedures such as tonsillectomy are no longer routinely performed in the absence of infection to prevent future infection. Yet, there are many procedures such as the prophylactic removal of third molars, which squander billions of dollars annually and injure tens of thousands of people, about which the public is ill-informed and thus subject to the risks of unnecessary surgery.(2)

Accordingly, the American Public Health Association (APHA) calls for dental care, like all aspects of health care, to be evidence-based. APHA "Encourages the collection, review, dissemination and policy applications of knowledge supporting or negating the efficiency and cost-effectiveness of specific forms of dental care….Encourages dental professionals, consumers, private and public health care financing agencies, and state licensing authorities to adopt an evidence-based approach to dental services, in order to rationally control costs, help assure quality and favorable outcomes and extend more affordable dental care to a wider public…."(3)

The Mission Statement of the American Dental Association (ADA) states, “A major objective of the ADA is to promote a good quality of life by improving the oral health of the public and encouraging optimal health behaviors. To achieve this objective, it is imperative that the ADA take a leading role in promoting, conducting and critically reviewing research on topics related to dentistry and its relationship to the overall health of the individual.”(4) In keeping with this objective, it is incumbent on the ADA, and all health related organizations, to promote evidence-based practice and to discourage treatment that is of questionable value and has the potential for causing significant injury to the public.

No one questions the removal of third molars, or any other tooth, where there is evidence of pathological changes such as infections, nonrestorable carious lesions, cysts, tumors and damage to adjacent teeth. But the contention by many dentists, especially oral surgeons, that retaining third molars, whether or not impacted, will likely lead to sufficient harm to justify removing all third molars has not been substantiated. For example, a study of 3702 “neglected” impactions (96% third molars), retained for an average of 27 years, found only 0.81% with dentigerous cystic changes. Further, any type of pathological change can be expected eventually in only 12% of an impacted third molar population and 1.8% of the general population, including those with impacted teeth. Accordingly, the authors questioned routine removal of impacted third molars.(5) The 12% incidence of pathology does not include pericoronitis or inflammation and infection of the gum tissue around a tooth as it erupts, which is distinguishable from normal “teething.” Estimates range from 6-10%. Adding an average of 8% raises the

potential for third molar pathology to 20%. Also, it has been reported that as many as one-third of the population may experience some discomfort at one time or another associated with wisdom teeth; thus, there is likely justification for, at most, one-third of the extractions currently being done.(2)

The assertion "that third molars should be removed routinely to prevent serious disease is not supported by scientific evidence….Third-molar surgery also is not without risk of permanent injury, most commonly paresthesia. Other dangers include iatrogenic fractures of the jaws, injury to the temporomandibular joints, damage to the maxillary sinus, destruction of the maxillary tuberosities, injury to adjacent teeth, occasional deaths attributed to general anesthesia."(6,7)

A review of interventions for treating asymptomatic impacted wisdom teeth concluded, "Watchful monitoring" may be a more appropriate strategy. "Prudent decision-making, with adherence to specified indicators for removal, may reduce the number of surgical procedures by 60 percent or more."(8)

A review of the literature on third molar extraction by an oral pathologist concluded, "…third molars without associated pathology or developmental conditions are sacrificed, usually in adolescents and young adults, like no other human tissue, in the name of preventive dental care….in more than 98 percent of cases, there is no apparent benefit to prophylactic third-molar extraction in adolescents. The concept that all third molars (functional or nonfunctional) should be extracted prophylactically should be abandoned."(9)

It is the current policy of the National Health Service in Great Britain that, "The practice of prophylactic removal of pathology-free impacted third molars should be discontinued….There is no reliable evidence to support a health benefit to patients from the prophylactic removal of pathology-free teeth."(10)

The risks of temporary and permanent injury resulting from impacted third molar extractions have been documented by numerous studies. Incidence of permanent paresthesia of the mandibular nerve varies from a low of 0.33% to a high of 1%.(11,12) Injury to the temporomandibular joints (TMD/TMJ) has been reported at 1.2% for patients aged 15-20.(13) The nearly 6000 oral and maxillofacial surgeons account for 94% of third molar extractions in the United States, averaging 52.7 cases a month and 9.9 million wisdom teeth annually.(14,15) Thus, an estimated 3.8 million people experience 5 million mandibular third molar extractions each year, resulting in 17,000-50,000 people afflicted with permanent mandibular nerve paresthesia, and tens of thousands more with TMD/TMJ injuries, an unknown number of which also become permanent. Furthermore, patients suffer an average of 2.7 days, over 10 million days in aggregate, of discomfort and disability—pain, swelling, bruising and malaise—and absence from school and loss of work and income following uncomplicated third molar extractions.(16)

If, based on the incidence of pathology and/or symptoms, there is justification at most for one-third of these extractions, then two-thirds are done supposedly to prevent future harm

for which there is no credible evidence-basis. Nonetheless, prophylactic removal of third molars continues to be recommended by the American Association of Oral and Maxillofacial Surgeons (AAOMS) without reservation. In a national newspaper advertisement, AAOMS concluded, "*The Number One Reason for Removing Your Wisdom Teeth*-**Peace of Mind."**(17) There was no mention of the risk of potential injury or negative outcome or contraindications as is customary for the advertisement of prescription drugs and other medical procedures.

Because the rationale to remove all third molars to prevent cysts and crowding of anterior teeth has failed the evidence-based test, AAOMS has shifted its emphasis to third molars as a cause of periodontal disease and, potentially, other general debilitating or life-threatening conditions. Since the early 1990s, AAOMS has sponsored research exploring periodontal disease in third molars, suggesting it might be an initiating cause of generalized periodontal disease.(18) The studies define periodontal pathology as gingival pocket depth equal to or greater than 5 mm. Although this definition may be questioned with respect to third molars that often have 4-5 mm pockets, many of which may be pseudopockets that are not "pathological," there were still only 25% of third molars in a study of 329 patients that had pockets equal to or exceeding 5mm.(19) Also, following third molar extraction, "Given healthy periodontal status preoperatively, 48% [of adjacent second molars] had worsening of their periodontal measures…."(20) Because 75% of the third molars did not have pathological periodontal pockets by any measurement, and nearly half of second molars were worse off, removal of all third molars for periodontal reasons also fails the evidence-based test.

The 2000 U.S. Surgeon General's report, Oral Health in America, and Healthy People 2010 emphasize the role of public health and health care providers, educators, and researchers in improving the public's health literacy.(21,22) Accordingly, the American Dental Association defined oral health literacy as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate oral health decisions."(23)

Improvement in health literacy requires more than exposure to information, much of which can appear to the public as confusing if not contradictory; it also requires provision of "clear, understandable science-based health information to the American people."(24) It requires assistance in interpretation by public health organizations and agencies with no financial or personal interests one way or the other.

Accordingly, the American Public Health Association:

1. Recommends that the removal of third molars (wisdom teeth), like the removal of any teeth, should be based on evidence of diagnosed pathology or demonstrable need;
2. Opposes the indiscriminate prophylactic removal of third molars, which subjects individuals and society to excessive costs, unnecessary morbidity, and the risks of permanent injury;
3. Urges the American Association of Oral and Maxillofacial Surgeons to adopt an evidence-based policy for determination of third molar extractions and to inform

patients of the inherent risks of injury and morbidity associated with third molar extractions;

4. Urges governmental agencies and companies administering dental insurance to adopt and apply policies that exclude coverage of prophylactic third molar extractions; these policies should include pretreatment review of evidence-based need for determination of benefits for elective surgery;
5. Specifically urges the American Dental Association, which represents the majority of practicing dentists, to include in its research agenda "to understand the outcomes of elective dental procedures" research in support of the application of evidence-based dentistry regarding the risks of prophylactic third molar extractions, and to determine the most effective methods to translate such evidence-based research into the practice of dentistry;
6. Urges all public health agencies and dental professional organizations to disseminate information regarding the lack of necessity for and the inherent risks of prophylactic third molar extractions in keeping with their dedication to improving the health literacy of the public and its consequent ability to make informed health care decisions.

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