



New Considerations in the Treatment of Compromised Third Molars

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ABSTRACT

Management of asymptomatic malposed third molars is a controversial topic. As a result, many malposed or mildly pathologic third molars are not removed. Historical pro and con arguments regarding removal centered around cost and the aspects of the surgical removal itself. Current epidemiology and medical advances address issues not considered before.

There is a large growth of the aging population (over 40 years). More and more of these elderly patients are requiring third molar removal. Over a five-year period, 1997-2002, the incidence almost doubled to 17.9 percent. This age category is known to be high risk for third molar surgery.

An equally or higher risk is the rapidly growing number of patients seeking third molar surgery who are moderately severely medically compromised. This paper reviews how this lack of consensus results in delayed removal of malposed third molars in this population. Preventive dental concepts, removing compromised third molars earlier, would eliminate the high risk to this aging population.

In 2004, there is no clearly defined consensus on how to manage compromised third molars. There is also considerable disagreement on what constitutes a compromised third molar. Third molars may be erupted and carious, or in a variety of partially or completely unerupted states ranging from soft tissue impactions to full bony impactions. While abnormal, in the absence of symptoms, many clinicians follow the edict, "if it's not bothering you, leave it alone."

This substantial variance of professional opinion regarding removal of third molars illustrates a lack of uniformity in care currently provided. The conflicting literature on the necessity for and timing of third molar removal, shows a historical lack of consensus as well. Unfortunately, this lack of consensus creates a credibility gap for the dental profession and confusion in the general public.

As "baby boomers" (the largest mass of the population) approach middle and advanced age, the need to resolve prophylactic third molar treatment issues becomes more pressing. With time, age



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and health status become increasingly significant risk factors. The dental profession must maintain the confidence of the public. A step toward that aim is to ensure that recommended care is consistent amongst dentists and that it is supported by sound evidence-based studies.

It is significant that the largest proportion of the population is entering middle or advanced age. At older ages, the risks and complications of dental surgery become significantly higher as patients are more likely to have severe chronic diseases such as cardiac problems and strokes, or may not heal as rapidly as younger patients may. This increased risk exposes dentists to increased complications in surgery and possibly increased episodes of litigation. For example, fragile cardiac or stroke patients kept alive by medications may not survive a dental extraction.

Important arguments against removal of asymptomatic compromised third molars exist. Economic restrictions involve HMOs, insurance companies, third parties, and some members of the dental profession. Because of these financial restraints, patients may refuse, and third-party payers fail to authorize, removal of teeth regardless of the degree of pathology present.

Tulloch et al¹ states that "this practice (removal of "asymptomatic" compromised third molars) appears neither to be associated with the least expected morbidity to patients nor with the imperative of cost containment." At the 1977 National Institute of Health Consensus Development Conference: Removal of Third Molars, it was concluded that the removal of asymptomatic non-pathologic teeth is non-essential surgery that exposes patients to unnecessary risk.² Oral and maxillofacial surgeon, E. Preston Hicks stated that, "routine removal of impacted or unerupted disease free third molars cannot be justified."³

What are the indications for removal of asymptomatic compromised third molars? A great deal of information has

been generated over the years regarding the timing of third molar removal. In particular, there is a large body of literature documenting the increased incidence of dental complications when third molar surgery is performed on an aging population.⁴⁻¹² Consequently, this paper will not address the specific surgical risks and complications but will focus instead on how the aging population is affected by retained third molars.

Third Molars in the Aging Population

With human life expectancy on the rise, the issue of the aging population mass becomes a major factor in third molar treatment planning. In a study done by the authors, it was found that between 1992 and 1997, 10.5 percent of the patients requiring removal of third molars were middle or advanced age (older than 40). Fifty percent of the patients over the age of 60 had complete bony impactions. From 1997 to 2002, 17.9 percent of patients were older than 40. Of that population, 19.5 percent were older than 60 (60- to 91-years old). One in five patients requiring third molar removal by a dentist is in the high to very high-risk category.

One reason for the increase in the middle to advanced aged population can be attributed to medical advances in treating disease. Current mortality patterns suggest that the mortality rate over age 85 is decreasing to equal the rate under age 85, creating an expanding pool of patients who are at high to critically high risk of having medical complications associated with even minor surgical procedures.¹³

Dentists are not accustomed to treating critically high-risk patients. For example, a 40-year-old patient presents for urgent removal of bilateral periodontally infected third molars. The patient had the lower third molars extracted as a young adult. The upper impacted third molars were not authorized by the insurance company because they were "asymptomatic." The periodontist tried

to treat the patient's infected teeth for two months without success. The urgency was caused by a failing heart valve. Cardiac valve replacement absolutely cannot be done in the presence of dental infections, due to bacteremia or septicemia. Consultation with the cardiac surgeon indicated the valve could "blow" at anytime. Because these teeth were not prophylactically removed when the patient was healthy, intra-operative mortality becomes a very real risk.

Many dentists do not consider a 2-millimeter pericoronal radiolucency a concern. Adelsperger, Glosser (1999)¹⁴ and Knights (1991)¹⁵ demonstrate that the absence of radiographic disease in impacted third molars is not evidence of absence of pathology. Biopsy specimens of pericoronal tissue of impacted third molars with no radiographic pathology in patients over 21 years of age show a 75 percent incidence of squamous metaplasia similar to that found in odontogenic cysts.¹⁴

Odontogenic cysts comprise the majority of major pathologies in compromised third molars. The incidence of squamous cell carcinoma of dental pathologic tissue is commonly considered as being statistically rare.

Very few dentists are aware that malignancies arising from odontogenic cysts have a very high mortality rate.¹⁶⁻²⁰ Although the incidence of such malignancies is low, Eversol²¹ and Schwimmer²¹ report a 47 percent and 37 percent mortality two years after treatment.

Preventive dentistry has unequivocally demonstrated that early prophylactic treatment is more cost effective than waiting until potential pathology becomes more severe or symptomatic. Under the "watchful waiting" protocol, the cost of biannual radiographs and clinical exams added to the increased cost of a surgery with infection — considered over a 40 to 50 year time span — easily exceeds the cost of prophylactic or early treatment of compromised third molars.

Conclusion

The present day lack of consensus regarding compromised yet asymptomatic third molars, creates confusion in diagnosis of patients. Ultimately, each case must be based on individual factors. The pros and cons of early or prophylactic treatment of compromised third molars should be considered.

The aging mass of our population and the surging number of functional but medically compromised patients places a stronger emphasis on timely treatment. Preventive dentistry becomes a more critical issue. In two decades, the population mass of baby boomers will be in their 60s and 70s with even more serious medical handicaps. "Simple" surgical and dental procedures might require the advised consent of "risk of death." It is thus imperative that dentistry develop a consensus regarding treatment of compromised third molars with a sound scientific basis. Third parties and self-serving entities usually assume no liability but strongly try to influence our decisions. Early or prophylactic treatment results of compromised third molars appear consistent with the tried and true experience of preventive dentistry. **CDA**

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