Removal of Symptomatic Third Molars May Improve Periodontal Status of Remaining Dentition

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Purpose: To assess the impact of third molar removal on the periodontal status of adjacent second molars and teeth more anterior in the mouth in patients with mild symptoms of pericoronitis.

Patients and Methods: Healthy patients with mild symptoms of pericoronitis affecting at least 1 mandibular third molar were recruited for a study approved by the institutional review board. The subset analyzed in this study had all 4 third molars removed. Data were collected at enrollment and at least 3 months after surgery. Full-mouth periodontal probing was conducted at 6 sites per tooth. A probing depth of at least 4 mm (PD4+) was considered an indicator for periodontal pathology. The presence of a PD4+ on the distal of second molars (D2Ms) or anterior to the D2Ms, the number of PD4+s, and extent scores (percentage of PD4+s of all possible probing sites) were assessed at the patient and jaw levels. The association between patients' pre- and postsurgical periodontal status was assessed using the McNemar exact test. The level of significance was set at .05.

Results: The median age of the 69 patients was 21.8 years (interquartile range, 20.2 to 25.2 yr). Forty-five percent were men, and 57% were Caucasian. Significantly more patients (88%) had at least 1 D2M PD4+ at enrollment compared with after surgery (46%; $P < .01$). D2M extent scores decreased from 31.5 at enrollment to 11 after surgery. Significantly more patients (61%) had at least 1 PD4+ anterior to the D2M at enrollment compared with after surgery (29%; $P < .01$). Extent scores anterior to the D2M decreased from 2.0 at enrollment to 0.6 after surgery.

Conclusions: Removal of third molars in patients with mild pericoronitis symptoms improved the periodontal status of the D2Ms and teeth more anterior in the mouth.

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Pericoronitis is a periodontal inflammatory condition manifested chiefly by pain, often accompanied by erythema, edema, and drainage from the affected region. Lymphadenopathy, fever, trismus, and pain with swallowing may be present.[1-5] The condition is associated most often with mandibular third molars and is a frequently cited reason for third molar removal.[4,6-9] Although pericoronitis is diagnosed most often in young adults,[1,3,10] the diagnosis is not unique to this population. In a cohort of 60 patients older than 30 years, pericoronitis remained the leading cause of third molar symptoms (50%).[9] Pericoronitis was the most frequently cited reason (41%) for third molar removal in a series of more than 300 patients older than 35 years.[11] In another study, patients older than 40 years had third molars removed as frequently for pericoronitis as for caries.[6]

Whether and when third molars ought to be removed because of pericoronitis remains controversial; even published guidelines differ. According to the National Institute of Clinical Excellence guidelines issued in 2000, removal of third molars is not indicated after a single episode of pericoronitis unless it is "particularly severe."[12] In contrast, the Scottish Intercollegiate Guidelines Network delivered a grade C recommendation that third molar removal be strongly considered after even 1 episode of pericoronitis.[13] The National Institutes of Health has not issued guidelines since a consensus conference was held in 1979.[14] The US Department of Health and Human Service's National Guideline Clearinghouse has only 1 set of guidelines regarding third molar management: the HealthPartners Dental Group and Clinics asserts that a history of pericoronitis is a relative indication for third molar removal.[15] Additional evidence is needed to develop more definitive, evidence-based guidelines on this topic.

Conflicting reports exist regarding the impact of third molar removal on the periodontal status of the adjacent second molar. Although many studies examining this question have included some patients with pericoronitis,[16-19] few have specifically evaluated only patients with pericoronitis affecting third molars. The present analyses were designed to compare the periodontal status of second molars and teeth more anterior in the mouth before and after third molar removal in patients with mild symptoms of pericoronitis.

Patients and Methods

The data for this institutional review board–approved, prospective, exploratory, longitudinal, clinical study were collected from patients enrolled from 2006 through 2012 at a single academic clinical center, the University of North Carolina, Chapel Hill. Patients were recruited by advertisements in the university student newspaper and informally by word of mouth. Inclusion criteria for the larger study were signs or symptoms of mild pericoronitis affecting at least 1 mandibular third molar (spontaneous pain, localized edema, and drainage), age 18 through 35 years, and good general health (American Society of Anesthesiologists Class I or II). Exclusion criteria included major signs or symptoms of pericoronitis (fever >101°F, dysphagia, maximum incisal opening <20 mm, facial swelling or cellulitis, or severe intractable pain), severe periodontal disease (American Academy of Periodontology Class IV), systemic antibiotic use within the preceding 2 months, tobacco use, body mass index greater than 29 kg/m^2, pregnancy, concurrent acute illness, or medical contraindication to full-mouth periodontal probing.

Data from a subset of all patients in the larger study who had all 4 third molars removed with a minimum follow-up interval of 3 months were included in these analyses. Demographic and full-mouth periodontal probing depth (PD) data at 6 sites per tooth including the third molars were collected at enrollment. PDs were rounded down to the nearest lower whole number (eg, 4.6 mm was rounded to 4.0 mm). A periodontal PD of at least 4 mm (PD4+) was considered a clinical indicator of periodontal inflammatory disease. Clinical data were collected in a similar manner at a postsurgical follow-up.

The presence of a PD4+ on the distal of the second molar (D2M) or anterior to the D2M, the number of PD4+s, and extent scores for PD4+ (percentage of PD4+s of all possible probing sites) were assessed at the patient and jaw levels. The association between patients' enrollment and postsurgical periodontal status was analyzed with the McNemar exact test.

Results

DEMOGRAPHICS

Sixty-nine patients with mild symptoms of pericoronitis had all 4 third molars removed. Forty-five percent were men and 57% were Caucasian. Most were well educated: 90% had at least some college education. The median age at enrollment was 21.8 years (interquartile range [IQR], 20.2 to 25.2 yr). The median time from enrollment to surgery was 2.7 months (IQR, 1.4 to 4.2 months), and the median time from surgery to after surgery to follow-up was 4.9 months (IQR, 3.3 to 7.5 months; Table 1).

DISTAL OF THE SECOND MOLAR

Periodontal pathology (PD4+) was seen more frequently in the mandible than in the maxilla. For example, at enrollment, only 14 patients (20%) had a PD4+

Table 1. DEMOGRAPHIC CHARACTERISTICS OF PATIENTS WITH MILD SYMPTOMS OF PERICORONITIS AT ENROLLMENT WHO HAD ALL THIRD MOLARS REMOVED (N = 69)

Gender	
Female	38 (55)
Male	31 (45)
Race or ethnicity	
Caucasian	39 (57)
African American	14 (20)
Asian	8 (11.5)
Other	8 (11.5)
Education*	
High school graduate (or less)	6 (9)
At least some college	62 (90)
Age (yr)	
<25	51 (74)
≥25	18 (26)
Time from enrollment to surgery (mo)	2.7 (1.4-4.2)
Time from surgery to postsurgical follow-up (mo)	4.9 (3.3-7.5)

Note: Data are presented as number (percentage) or median (interquartile range).

* Data were incomplete for 1 patient.

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on the maxillary D2Ms compared with 59 patients (86%) with a PD4+ on the mandibular D2Ms. Only 4 patients (6%) had a maxillary D2M PD4+ detected at postsurgical follow-up. However, 31 (45%) had a mandibular D2M PD4+ at postsurgical follow-up (Tables 2 and 3; Fig 1).

The proportion of patients with at least 1 PD4+ on any D2M at enrollment decreased significantly after surgery: 61 patients (88%) had at least 1 D2M PD4+ at enrollment compared with only 32 (46%) at postsurgical follow-up ($P < .01$). Of the 61 patients with D2M PD4+ at enrollment, 33 (54%) showed improvement after third molar removal (all D2M PDs <4 mm). However, 4 of 8 patients who had all D2M PDs shallower than 4 mm at enrollment developed at least 1 D2M PD4+ after third molar removal (Table 4; Fig 1).

On a patient level, the median number of D2M PD4+s decreased from enrollment to postsurgical follow-up, from 2 (IQR, 2 to 4) to 0 (IQR, 0 to 1). When evaluating mandibular sites only, the median number of D2M PD4+s decreased from 2 (IQR, 1 to 3) to 0 (IQR, 0 to 2). Mandibular D2M PD4+ extent scores (percentage of PD4+s of all possible probing sites) were decreased nearly threefold (from 54.3 to 19.6) after removal of third molars. Combining data from both jaws, D2M PD4+ extent scores also decreased nearly threefold from enrollment to postsurgical follow-up (31.5 to 11; Tables 5 and 6).

Table 2. COMPARISON OF PATIENTS WITH MILD SYMPTOMS OF PERICORONITIS AT ENROLLMENT AND POSTSURGICAL FOLLOW-UP AFTER THIRD MOLAR REMOVAL WITH AT LEAST ONE PERIODONTAL PD OF AT LEAST 4 MM OR ALL PDS SHALLOWER THAN 4 MM ON THE MAXILLARY D2MS (N = 69)

	Postsurgical Maxillary D2M		
Enrollment Maxillary D2M	All PDs <4 mm	≥1 PD ≥4 mm	Total
All PDs <4 mm	52 (75)	3 (4)	55 (80)
≥1 PD ≥4 mm	13 (19)	1 (1)	14 (20)
Total	65 (94)	4 (6)	69 (100)

Note: Data are presented as number (percentage). The percentage of patients with at least 1 PD of at least 4 mm on the maxillary D2M was significantly smaller after surgery ($P = .0124$).

Abbreviations: D2M, distal of second molar; PD, probing depth.

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ANTERIOR TO THE D2M

In the maxilla, 13 patients (19%) had at least 1 PD4+ anterior to the D2M at enrollment, whereas only 4 (6%) had a PD4+ detected anterior to the D2M at postsurgical follow-up ($P = 0.03$; Table 7). In the mandible, 41 patients (59%) had at least 1 PD4+ anterior to the D2M at enrollment, whereas 18 (26%) had a PD4+ anterior to the D2M at follow-up after third molar removal ($P < .01$; Table 8).

The percentage of patients with at least 1 PD4+ anterior to D2M decreased significantly from enrollment

Table 3. COMPARISON OF PATIENTS WITH MILD SYMPTOMS OF PERICORONITIS AT ENROLLMENT AND POSTSURGICAL FOLLOW-UP AFTER THIRD MOLAR REMOVAL WITH AT LEAST ONE PERIODONTAL PD OF AT LEAST 4 MM OR ALL PDS SHALLOWER THAN 4 MM ON THE MANDIBULAR D2M (N = 69)

	Postsurgical Mandibular D2M		
Enrollment Mandibular D2M	All PDs <4 mm	≥1 PD ≥4 mm	Total
All PDs <4 mm	5 (7)	5 (7)	10 (14)
≥1 PD ≥4 mm	33 (48)	26 (38)	59 (86)
Total	38 (55)	31 (45)	69 (100)

Note: Data are presented as number (percentage). The percentage of patients with at least 1 PD of at least 4 mm on the mandibular D2M was significantly smaller after surgery ($P < .0001$).

Abbreviations: D2M, distal of second molar; PD, probing depth.

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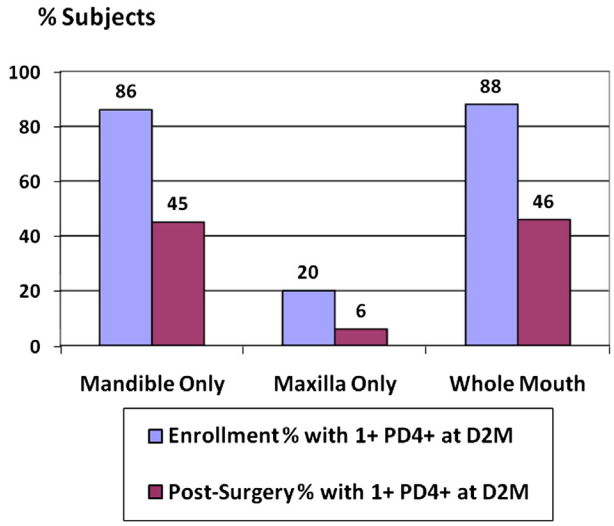

FIGURE 1. A comparison of the percentage of patients with at least 1 PD4+ at the D2M at enrollment and postsurgical follow-up after third molar removal in the mandible, maxilla, and whole mouth. D2M, distal of second molar; PD4+, probing depth of at least 4 mm.

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to follow-up after third molar removal. Forty-two patients (61%) had at least 1 PD4+ anterior to the D2M at enrollment compared with only 20 (29%) at postsurgical follow-up ($P < .01$; Table 9; Fig 2).

Of the 42 patients with at least 1 PD4+ anterior to the D2M at enrollment, 27 (64%) showed improvement after surgery; no PD4+s were detected at follow-up. Of the 27 patients with no PD4+ anterior to the D2M at enrollment, 5 (19%) developed at least 1 PD4+ anterior to the D2M after third molar removal (Table 9).

Comparing data from enrollment to postsurgical follow-up, the median number of patient-level PD4+s anterior to the D2M was decreased from 1 (IQR, 0 to 5) to 0 (IQR, 0 to 1). Also, PD4+ extent scores anterior to the D2M decreased from 2.0 to 0.6 for the same time frame (Table 5). Considering the mandible only, the median number of PD4+s anterior to the D2M was decreased from enrollment to postsurgical follow-up, from 1 (IQR, 0 to 4) to 0 (IQR, 0 to 1). PD4+ extent scores for mandibular probing sites anterior to the D2M decreased from 3.4 at enrollment to 0.9 at postsurgical follow-up (Table 6).

Table 4. COMPARISON OF PATIENTS WITH MILD SYMPTOMS OF PERICORONITIS AT ENROLLMENT AND POSTSURGICAL FOLLOW-UP AFTER THIRD MOLAR REMOVAL WITH AT LEAST ONE PERIODONTAL PD OF AT LEAST 4 MM OR ALL PDS SHALLOWER THAN 4 MM ON ANY D2M (N = 69)

	Postsurgical D2M		
Enrollment D2M	All PDs <4 mm	≥1 PD ≥4 mm	Total
All PDs <4 mm	4 (6)	4 (6)	8 (12)
≥1 PD ≥4 mm	33 (48)	28 (40)	61 (88)
Total	37 (54)	32 (46)	69 (100)

Note: Data are presented as number (percentage). The percentage of patients with at least 1 PD of at least 4 mm on any D2M was significantly smaller after surgery ($P < .0001$).

Abbreviations: D2M, distal of second molar; PD, probing depth.

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Table 5. COMPARISON AT ENROLLMENT AND POSTSURGICAL FOLLOW-UP OF THE NUMBER AND EXTENT SCORES (PERCENTAGE OF ALL POSSIBLE PD4+S) OF PERIODONTAL PROBING SITES WITH PD4+ FOR ALL PATIENTS ENROLLED WITH MILD SYMPTOMS OF PERICORONITIS (N = 69)

	Median Number (IQR)		Extent Score (% All Possible PD4+s)	
Location	Enrollment	After Surgery	Enrollment	After Surgery
Third molar	2 (1-5)	—	13.3	—
D2M	2 (2-4)	0 (0-2)	31.5	11
Anterior to D2M	1 (0-5)	0 (0-1)	2.0	0.6

Abbreviations: D2M, distal of second molar; IQR, interquartile range; PD4+, probing depth of at least 4 mm.

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Table 6. COMPARISON AT ENROLLMENT AND POSTSURGICAL FOLLOW-UP OF THE NUMBER AND EXTENT SCORES (PERCENTAGE OF ALL POSSIBLE PD4+S) OF MANDIBULAR PERIODONTAL PROBING SITES WITH PD4+ FOR ALL PATIENTS WITH MILD SYMPTOMS OF PERICORONITIS (N = 69)

	Median Number (IQR)		Extent Score (% All Possible PD4+s)	
Location	Enrollment	After Surgery	Enrollment	After Surgery
Mandibular third molar	2 (1-4.5)	—	24.1	—
Mandibular D2M	2 (1-3)	0 (0-2)	54.3	19.6
Mandibular anterior to D2M	1 (0-4)	0 (0-1)	3.4	0.9

Abbreviations: D2M, distal of second molar; IQR, interquartile range; PD4+, probing depth of at least 4 mm.

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Table 7. COMPARISON OF PATIENTS WITH MILD SYMPTOMS OF PERICORONITIS AT ENROLLMENT AND POSTSURGICAL FOLLOW-UP AFTER THIRD MOLAR REMOVAL WITH AT LEAST ONE PERIODONTAL PD OF AT LEAST 4 MM OR ALL PDS SHALLOWER THAN 4 MM ON MAXILLARY PROBING SITES ANTERIOR TO D2M (N = 69)

	Postsurgical Maxillary Anterior to D2M		
Enrollment Maxillary Anterior to D2M	All PDs <4 mm	≥1 PD ≥4 mm	Total
All PDs <4 mm	52 (75)	4 (6)	56 (81)
≥1 PD ≥4 mm	13 (19)	0 (0)	13 (19)
Total	65 (94)	4 (6)	69 (100)

Note: Data are presented as number (percentage). The percentage of patients with at least 1 PD of at least 4 mm on any site anterior to the D2M on the maxilla was significantly smaller after surgery ($P = .0290$).

Abbreviations: D2M, distal of second molar; PD, probing depth.

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Discussion

The present data comparing the enrollment with the postsurgical clinical periodontal status of patients with mild symptoms of pericoronitis in a longitudinal study suggest that removal of third molars significantly improves the periodontal condition of second molars and teeth more anterior in the mouth.

Table 8. COMPARISON OF PATIENTS WITH MILD SYMPTOMS OF PERICORONITIS AT ENROLLMENT AND POSTSURGICAL FOLLOW-UP AFTER THIRD MOLAR REMOVAL WITH AT LEAST ONE PERIODONTAL PD OF AT LEAST 4 MM OR ALL PDS SHALLOWER THAN 4 MM ON MANDIBULAR PROBING SITES ANTERIOR TO D2M (N = 69)

	Postsurgical Mandibular Anterior to D2M		
Enrollment Mandibular Anterior to D2M	All PDs <4 mm	≥1 PD ≥4 mm	Total
All PDs <4 mm	24 (35)	4 (6)	28 (41)
≥1 PD ≥4 mm	27 (39)	14 (20)	41 (59)
Total	51 (74)	18 (26)	69 (100)

Note: Data are presented as number (percentage). The percentage of patients with at least 1 PD ≥4 mm on any site anterior to the D2M in the mandible was significantly smaller after surgery ($P < .0001$).

Abbreviations: D2M, distal of second molar; PD, probing depth.

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Table 9. COMPARISON OF PATIENTS WITH MILD SYMPTOMS OF PERICORONITIS AT ENROLLMENT AND AFTER THIRD MOLAR REMOVAL WITH AT LEAST ONE PERIODONTAL PD OF AT LEAST 4 MM OR ALL PDS SHALLOWER THAN 4 MM ON ANY PROBING SITE ANTERIOR TO D2M (N = 69)

	Postsurgical Patient Level Anterior to D2M		
Enrollment Anterior to D2M	All PDs <4 mm	≥1 PD ≥4 mm	Total
All PDs <4 mm	22 (32)	5 (7)	27 (39)
≥1 PD ≥4 mm	27 (39)	15 (22)	42 (61)
Total	49 (71)	20 (29)	69 (100)

Note: Data are presented as number (percentage). The percentage of patients with at least 1 PD of least 4 mm on any site anterior to the D2M at the patient level was significantly smaller after surgery ($P = .0001$).

Abbreviations: D2M, distal of second molar; PD, probing depth.

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At enrollment, most patients (88%) had periodontal PDs (PD4+) on the D2Ms; significantly fewer patients (46%) had a D2M PD4+ at follow-up after removal of all 4 third molars. Similarly, for periodontal probing sites anterior to the D2M, at enrollment most patients (61%) had a PD4+ detected. Significantly fewer patients

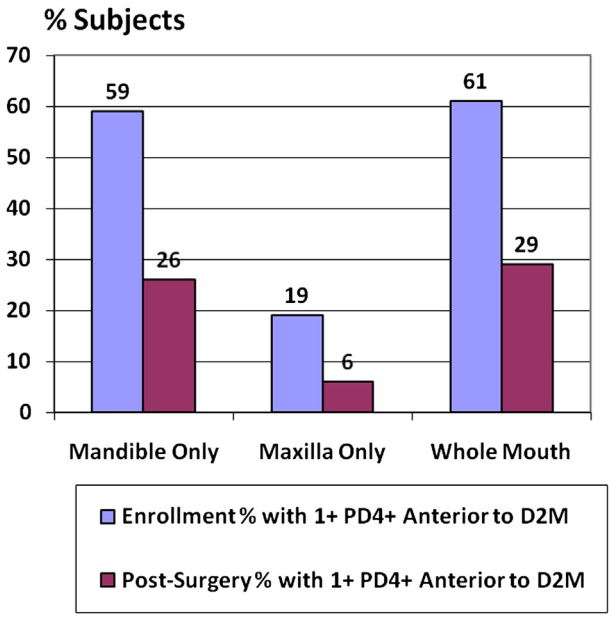

FIGURE 2. A comparison of the percentage of patients with at least 1 PD4+ anterior to the D2M at enrollment and postsurgical follow-up after third molar removal in the mandible, maxilla, and whole mouth. D2M, distal of second molar; PD4+, probing depth of at least 4 mm.

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(29%) had at least 1 PD4+ anterior to the D2M detected at postsurgical follow-up.

For these young patients with mild symptoms of pericoronitis, low PD4+ extent scores and median numbers of PD4+ at enrollment suggested that these patients were in the early stages of periodontal inflammatory disease; the D2M was more affected than were PDs on sites more anterior in the mouth. Nevertheless, a threefold decrease in D2M PD4+ extent scores and PD4+ extent scores anterior to the D2M were realized from enrollment to postsurgical follow-up.

The present data are compatible with current biological models of periodontal inflammatory disease focusing on the biofilm-gingival interface (BGI).[20] Periodontal pathology results from the complex interplay between the host immune response and periodontal pathogens housed in biofilm at the BGI. Deeper periodontal PDs reflect an increased surface area between the host gingival tissue and the nonsheddable bacterial biofilm on the teeth.

As known from prior studies, patients with deeper PDs in the third molar region, all third molars, and the D2M periodontal probing sites have increased levels of red and orange complex periodontal pathogens in the biofilm and higher levels of inflammatory mediators detected in the gingival crevicular fluid at the BGI.[21,22] Blakey et al[23] reported an increase in counts of pathogenic anaerobic bacteria at subgingival sites in patients with pericoronitis compared with asymptomatic patients, not only at symptomatic third molar sites, but also at first molar sites and at asymptomatic third molar sites. These subgingival microbial counts remained elevated 1 week after local debridement and daily irrigation of affected sites, but decreased significantly 3 months after third molar removal. Data from Rajasuo et al[24] were similar to those of Blakey et al; in patients with partially erupted third molars, total bacterial counts increased at second molar subgingival sites after 5 months in patients who retained their third molars, but decreased in those whose third molars were removed. These data suggested that removal of third molars may be beneficial in symptomatic patients by decreasing the surface area of the BGI and the associated elevated numbers of subgingival red and orange complex bacteria that are known risk factors associated with periodontal inflammatory disease and its progression.

A decrease in pathogens colonizing at third molar subgingival sites after third molar removal also may lead to decreased bacterial counts at subgingival sites more anterior in the jaws. A smaller surface area of the BGI with the overall decreased pathogenic bacterial burden favorably alters the host immune response, a mechanism that could explain the overall improvement in periodontal status seen after surgery in patients after third molar removal. This complex series of events deserves further study in older patients who may have delayed removal of affected third molars.

Irrigation of the affected symptomatic sites, analgesics, antibiotics, and removal of the opposing third molar can be considered only palliative treatment for symptoms of pericoronitis. Data from Blakey et al[23] suggested that, although symptoms improve after gross debridement at symptomatic sites and 1 week of daily irrigation, this treatment does not provide a decrease in bacterial counts seen after third molar removal. In a small pilot study in pregnant patients, Moss et al[25] found that mechanical debridement of biofilm from all teeth in the second trimester was less effective in the presence of visible third molars. In fact, in patients without visible third molars, postpartum periodontal subgingival pathogens were decreased after childbirth after a second trimester mechanical debridement, whereas in patients with visible third molars, subgingival "red cluster" pathogen counts actually increased after childbirth.

Importantly for those affected by pericoronitis, symptoms tend to recur within months unless third molars are removed, even after removal of an opposing third molar.[1] Venta et al[4] found that most patient-reported problems related to third molars were due to pericoronitis. Over half of those with problems with third molars reported prior episodes related to the same tooth. More than 60% reported prior problems with third molars other than the currently symptomatic tooth. Similarly, in a recent review of patients in the military, nearly half of those with pericoronitis had experienced at least 1 prior episode of similar symptoms.[7] Hill and Walker[26] followed patients with third molars initially managed nonsurgically: over 5 years, roughly one third of patients had their third molars removed, most for pericoronitis. Further, based on health-related quality-of-life data, acute pericoronitis was associated with significant pain and negative impacts on daily routines[27] and even lost work time; 30% of military patients with symptomatic third molars missed a median of 2.15 workdays.[7] Twenty-five percent of employed patients with pericoronitis in another series missed an average of 3 workdays.[9]

A delay in third molar removal in patients with third molar symptoms may be detrimental, negatively affecting healing potential. Kugelberg et al[17] extensively examined healing of intrabony defects after third molar removal and found that surgery after 30 years of age has a significantly negative impact on alveolar D2M bone levels after surgery compared with patients 20 years or younger. These data suggest that individuals with clinical evidence of periodontal inflammatory disease in the third molar region, with or without symptoms, would benefit from third molar removal in their 20s.

Whether or not third molars are symptomatic, third molar removal appears to be beneficial if a PD4+ is detected on adjacent D2Ms. Dodson and Richardson[28] reported on a systematic review of the impact of third molar removal on the periodontal status of adjacent second molars. The authors concluded that D2M periodontal health remains stable or improves after third molar removal, with 2 possible exceptions: a subgroup of patients in 1 study with fully impacted third molars had increased periodontal PDs after surgery, as did a group of patients with healthy presurgical periodontal status. Krausz et al[16] reported postsurgical D2M PD data on patients with a mean age of 30 years who had 1 impacted mandibular third molar removed while retaining the contralateral third molar; 32% were removed for pericoronitis. At a mean of 38 months after surgery, there were no significant differences in D2M PD between the comparison and intervention periodontal sites. However, there was significant improvement in alveolar bone level at the D2M on the side with the third molar removed.

Not all the present patients had an improved periodontal status after third molar removal. A D2M PD4+ was detected in 4 patients after surgery when all D2M PDs were shallower than 4 mm at enrollment. Because of the few affected patients, the authors have no data to explain this outcome. Additional studies to assess clinical and demographic variables that place patients at risk for deterioration of periodontal status after removal of symptomatic third molars should be undertaken to aid clinicians in identifying those at risk. Alternative management strategies other than third molar removal to control the complex interplay between periodontal pathogens and the host immune response at the BGI may emerge in the future.

Clinicians should exercise caution in applying the findings in this study to the general population. Ninety percent of the present patients had at least some college education, representing an education level higher than that in the general US population for this age group. Patients who reported tobacco use or recent antibiotic treatment, frequently encountered in patients with recurrent exacerbations of pericoronitis, were excluded. Further study of patients with pericoronitis symptoms using tobacco or those treated with short-term antibiotics is warranted. Future longitudinal studies that evaluate periodontal pathology in patients with mild pericoronitis who could be persuaded to retain all 4 third molars compared with patients who undergo removal of all third molars or of the affected third molar only would help deepen the understanding of the impact of third molar removal on periodontal health.

Despite these limitations and need for further study, the present data suggest that most patients with mild symptoms of pericoronitis have clinical evidence of early periodontal inflammatory disease and that periodontal health is improved after third molar removal. These findings should assist clinicians when counseling patients with mild symptoms of pericoronitis who seek advice regarding third molar management.

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Press Release

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