

Association between TMJ Pain and Wisdom Tooth Removal: A Review Article

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Abstract:

Most post-impacted mandibular third molar extraction surgery issues are brief and go away on their own in one to two weeks, but some are more serious and need for additional treatments to relieve the symptoms. Temporomandibular joints may be harmed as a result of third molar impaction, which has been identified as a risk factor. In addition, it has been noted that the trauma caused by the removal of third molars contributes to the development of temporomandibular joint disorders (TMD) symptoms. An increased number of patients may experience persistent facial and mouth pain as a result of third molar surgery's high frequency. This paper reviewed the literature to determine whether wisdom tooth removal and discomfort in the temporo mandibular joint were related.

Keywords: extraction, facial pain, impacted third molar, trauma, Temporomandibular joint.

INTRODUCTION:

The most frequent impacted tooth in the mouth is a third molar, which is more likely to occur in the lower jaw than that of the upper jaw.^[1] For a very long time, practitioners have disagreed about whether or not to surgically remove third molars that are impacted but do not have symptoms or pathology as a prophylactic measure.^[2] Evidence from recent years has demonstrated a higher prevalence of periodontal disease or other dental morbidities on the neighbouring second molars when third molars were present or impacted.^[3] A suggestion was additionally raised to surgically extract impacted third molars that are asymptomatic or pathology-free before they acquire abnormality, when the post-surgical recovery is best and there is a lesser chance of problems.^[4] To our knowledge, no previous research have examined the association that exists between temporo mandibular joint(TMJ) pain and wisdom tooth removal and that was the aim of this review article.

Literature insight on complications associated with wisdom tooth removal:

For both patients and doctors, weighing the benefits and drawbacks of impacted third molar removal is crucial. The patient should receive complete information on the benefits and drawbacks of surgery, in addition to perioperative concerns and associated complications, prior to any surgical treatments. In order to remove the tooth from the bone individually, an odontectomy operation called gingival flap elevation and tooth sectioning is frequently required for removal of impacted third molars. As a result, postoperative inflammatory symptoms such pain, swelling, and trismus are fairly prevalent. These symptoms are temporary and disappear on their own in two weeks.^[5]

Certain postoperative problems, nevertheless, are more serious than others, and they require further therapy to get better. For instance, even if the face swellings have subsided in certain individuals after third molar surgery, they may

nevertheless experience persistent TMJ discomfort. This is typically caused by the extraction using excessive lateral forces, which might result in disc displacement or traumatic inflammation at the joint unit. A prolonged healing, inflammatory consequence on the extraction wound brought on by the loss of a blood clot is known as a dry socket (also known as alveolar osteitis). Dry socket signs are foul breath, a dull throbbing ache, and/or transferred discomfort to the ear or other teeth, although there are no obvious indicators of infection.^[5]

According to an analysis of the most recent publications, impacted third molar removal difficulties have been documented at highly variable rates (4.6% to 30.9%), which can be attributed to differing definitions of consequences as well as different study designs and settings.^[6] Another study, for instance, revealed a 4.6% overall complication rate from a sample of 583 individuals who had their maxillary or mandibular third molars extracted by a single oral and maxillofacial surgeon in the United States. Their reported rate of postoperative problems per tooth was 3.4%, and these comprised dry socket, ongoing oroantral communication, infection, hematoma, bone spicules, discomfort, or edema.^[7] A prospective study found that 6.9% of 550 impacted mandibular third molars at a privately owned dental office in Canada had dry sockets, infections, or paresthesia of the inferior alveolar nerve.^[8]

TMJ pain and wisdom tooth extraction:

Temporomandibular disorders (TMDs) are disturbances that are characterised by pain around the TMJs and in the periauricular area, restrictions on mandibular mobility, deviations from functional movements, joint sounds, and a changed occlusal relation.^[9] TMD has a complex aetiology. If all risk factors for TMDs are taken into account individually, tooth clenching (77% of patients) and self-reported stress (59.3%) were found to be the most prevalent factors on this community, accompanied by wisdom tooth

removal history (34.3%), endotracheal intubation (30.7%), biting habits (29.3%), gum chewing (28%), and prior orthodontic therapy (28%) origins.^[9] The prevalence of TMD ranges from 3.7% to 12% in adults and from 0.7% to 18.6% in children.^[10] TMD is a public health issue that is especially significant in dentistry due to the prevalence of the condition and its effects on comfort of life.

These illnesses can emerge from a variety of factors. Also, there are numerous circumstances that exacerbate the symptoms of these conditions, making it crucial to research and identify these causes. The emergence of TMJ clicking, which is regarded as one of the key symptoms of TMD, may be negatively impacted by the presence of impacted third molars. Due to the numerous symptoms and complex causes of these illnesses, many dentists still find it difficult to diagnose them.^[11] Hence, the right therapy will be considerably aided by the diagnosis of the underlying causes and risk factors of these conditions.

TMJ issues have been linked to the removal of the third molar. Deangelis emphasizes on the significance of integrating a temporomandibular apparatus evaluation in the pre-operative assessment of individuals with impacted third molars.^[12] The traumatic removal of the third molar in the mandible may result in postoperative complications such orofacial discomfort and restricted mandibular action.^[11]

Another study showed that participants following third molar removal have a statistically insignificantly higher prevalence of TMDs six months after surgery when contrasted with untreated controls.^[10] In accordance with the requirements of each person, therapeutic assistance treatments in the fields of psychology, physical therapy (exercises), and physiotherapy may be connected with the therapies of TMD. Therapies of TMD may entail anterior splints, occlusal splints, splints with posterior occlusal support, occlusal adjustment, and removable therapeutic partial prostheses.

CONCLUSION:

The extraction of the impacted third molars has been mentioned as a causative factor that could harm TMJ.^[13] Because of their vicinity to the TMJ, impacted mandibular third molars can have an impact on the position and complexity of TMDs. This research helps show a strong link between TMD and an impacted third molar on the mandible. The combination of TMDs and an impacted mandibular third molar would make it easier to identify the majority of these conditions early and stop them from progressing.

Prophylactic treatment procedures can be used to address the related impacted mandibular third tooth and stop additional harm to the TMJ when taking into account the symptoms of TMDs.

According to the present research, people who have an impacted mandibular third tooth develop TMDs fairly frequently. This article also identifies the sort of impaction that is more likely to result in severe TMDs. Clinical staff and patients could prevent further harm to the TMJ area by receiving the relevant training. Future multi-centered prospective studies should be conducted in big populations.

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