Lower third molar surgery – consent and coronectomy

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OPINION

IN BRIEF

- Draws attention to the requirements in obtaining informed consent for lower third molar extraction.
- Reports cases where litigants have brought successful claims, where iatrogenic nerve injury has followed the extraction of a lower third molar and the option of coronectomy had not been offered pre-operatively.

This article reports a brief overview of the risks associated with lower third molar extractions, and the claims that coronectomy may be useful as a treatment modality in managing some aspects of those risks. It discusses the position in terms of consent, and reports that some cases suggest that clinicians who do not offer coronectomy in appropriate circumstances may be vulnerable to litigation.

INTRODUCTION

Lower third molar extractions can be associated with a significant degree of post-treatment morbidity. Some is not dissimilar to that of more routine extractions and tends to be self-limiting, commonly post-treatment swelling, bruising, bleeding, jaw stiffness, and pain. More significantly they can be associated with iatrogenic injury to the inferior alveolar nerve (IANI), leading to a temporary or permanently altered sensation to the lower lip, the skin over the chin, the teeth and gingivae on the injured side.[1]

The degree and description of altered sensation is variable and includes reduced sensation (hypo-aesthesia), abnormal sensation (paraesthesia) and unpleasant painful sensation (dysaesthesia).[2] Although the percentage risk is relatively low, extraction of lower third molars is a very common procedure and it is argued that a significant number of patients may be affected by IANI.[3]

In the UK, nationally accepted guidelines ensure surgery is undertaken only when necessary,[4] and the most usual reason for extraction is to relieve symptoms of acute pericoronal infection.

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Refereed Paper
Accepted 27 January 2016
DOI: 10.1038/sj.bdj.2016.217

Unfortunately, pain is common in IANI resulting in significant functional problems, and increasing numbers of medico-legal claims,[5] with patients reporting significant effects on self-esteem and quality of life.[6]

Litigation is frequently based on inadequacies in consent, planning and assessment, the causation of avoidable nerve injury, and poor post-surgical management.[7] Coronectomy has been put forward as a valid treatment option to reduce the risk of IANI in carefully selected cases.[1]

INFERIOR ALVEOLAR NERVE INJURY

The incidence of temporary (usually four to six months) and permanent nerve damage following the surgical removal of third molars varies according to author and report,[2] but is considered to be in the order of 1–5% for temporary effects and 0–0.9% for permanent deficit. Some authors quote higher figures, with 'high risk', teeth associated with risk as great as 20%.[1]

The main risk factors are reported as including: the skills and experience of the operator; the type of impaction; and the radiographic proximity of the tooth to the IAN.[8] The radiographic signs of increased risk of IANI have been classically described by Rood and Shehab.[9] Panoramic radiographs are currently central to assessment and management of third molar surgery. However, the radiograph may not always be easy to interpret and will be subject to individual operator evaluation. The difficulty then is that it is not always easy to identify which patients are particularly at risk, and impossible to identify which of the injured patients will be only mildly affected, with relatively little loss of amenity; and those who might suffer life-changing consequences. There is debate about the extent to which cone beam computed tomography should be used in the management of impacted mandibular third molars.[8] Radiation doses can be significantly higher than that from conventional dental X-ray equipment.[10] It may be particularly useful if the patient or tooth is compromised, to allow appropriate planning for removal of the symptomatic, high risk mandibular third molar with appropriate consent.[11]

CORONECTOMY

Coronectomy is a procedure designed to avoid IANI by retaining the roots of symptomatic, vital, lower third molar teeth that are considered to be close to the inferior alveolar canal. The method involves the removal of only the crown, in patients who are not medically compromised, leaving the roots of the impacted third molar undisturbed; thus avoiding direct or indirect damage to the IAN.[12] Coronectomy is a relatively new procedure, gaining popularity as a means of reducing risk. However, it is not commonly practiced worldwide. There are relatively few publications that study its effectiveness as a treatment modality, and surgeons remain concerned about potential short and long-term complications.[12]

A number of authors have reported positive results,[13,14] and a Cochrane Collaboration concluded, 'that in patients where third molar roots were close to the nerve canal, it was likely that coronectomy was associated with

a reduction in nerve damage, with no increase in alveolar osteitis.' However, it went on to say, 'it was not possible to reliably assess whether or not the procedure was associated with any long-term adverse effects.'[2]

Although coronectomy has demonstrated a reduction of IANI many clinicians are concerned about having a large section of root electively retained in the mandible, a significant common concern being that the retained root may develop a radicular cyst leading to further surgery and morbidity.[1]

As with most surgical techniques, successful coronectomy requires careful patient selection, careful operator technique, and attention to detail. Advocates of the procedure identify guidelines that clinicians need to be aware of to avoid failure.[1]

CONSENT

The Department of Health's, 'Good Practice in Consent' begins with a powerful statement:

'Patients have a fundamental legal and ethical right to determine what happens to them. Valid consent to treatment is therefore absolutely central in all forms of healthcare, from providing personal care to undertaking major surgery. Seeking consent is also a matter of common courtesy between health professionals and patients.'[15]

A patient's right to self-determination is a fundamental principle, upheld in professional guidelines,[16,17] and supported by the full weight of the law. In order to obtain valid consent, the clinician must provide: a clear explanation in words that the patient can understand about the treatment that is proposed and why it is necessary; the risks and benefits associated with the treatment: what might happen if the treatment is not carried out: and what other treatment options are available with their attendant risks and benefits.

The material risks of a procedure must be disclosed:

'A risk can be defined as material if a reasonable person in the patient's position, if warned of the risk, would be likely to attach significance to it.

'... It is material if the medical practitioner is, or should reasonably be, aware that the particular patient if warned of the risk would be likely to attach significance to it.'[18]

It is argued 'it would be illogical to hold that the amount of information to be provided by the medical practitioner can be determined from the perspective of the practitioner alone'[19]

Following the recent Montgomery case,[20] clinicians have a legal responsibility to take reasonable care to ensure that patients are aware of the material risks involved in any proposed treatment and also of any reasonable alternative.

Consent then is premised not on the basis of what the dentist thinks the patient should know, but on what the patient thinks they ought to know.

The Montgomery case makes clear the clinician's obligations to recognise a patient's legal and ethical right to autonomy.[21]

The coronectomy procedure of course has its own burdens in terms of consent. In addition to the usual post-treatment complications, patients must be warned of the possibility of a second surgical intervention if complications arise, and they should be advised at the outset that it is an intended procedure, as it is possible that roots are unintentionally mobilised during elevation of the crown.[12]

CASE LAW

Case law has shown that there have been a small number of cases where an out-of-court settlement can be achieved, in cases where there have been allegations (in part) that a coronectomy had not been offered during the consenting process, when the eventual treatment was third molar extraction.[22, 23, 24] It is important to mention that each case rests on its own merits. However, Wormald v South Tees Hospital MHS Foundation Trust specifically mentions that there were two limbs that should be considered in the allegations. Firstly, that if a coronectomy had not been offered, then that would be a breach of duty; and secondly, that the claimant must prove that had they been offered a coronectomy, they would have chosen that procedure. It can be difficult for patients to prove this second limb.[25,26]

However, on an objective approach to what a reasonable patient might consent to, being fully aware of the relative risks, and notwithstanding the risk of an abuse of hindsight, it would probably not be difficult to accept a patient's assertion that had they been given the opportunity they would have chosen coronectomy.

It is important to stress that these out-of-court settlements have not been proven in court and that a commercial decision to settle is otherwise unknown. What we do know, is that a coronectomy had not been offered, which is alleged to be a breach of duty. These cases were settled for between £10,000 and over £20,000.

CONCLUSION

Coronectomy is a relatively new procedure perceived by many clinicians as an important consideration in risk-managing third molar extractions with above average risks. It is enthusiastically embraced by its advocates, but viewed with suspicion and concern about long-term complications by detractors. What seems certain is that whatever individual clinicians or surgical departments may think about coronectomy, they will need to account for the views of the patient.

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