

# Summary of: Experience in third molar surgery: an update

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VERIFIABLE CPD PAPER

## FULL PAPER DETAILS

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Online article number E1  
Refereed Paper – Accepted 26 March 2010  
DOI: 10.1038/sj.bdj.2010.581  
<sup>©</sup>British Dental Journal 2010; 209: E1

**Background** The relationship between a surgeon's experience and the incidence of postoperative complications after third molar surgery is assessed in this prospective clinical study. Previous reports have shown this to be one of the most influential factors on surgical outcome. **Method** In this study, 3,236 patients underwent surgical removal of impacted third molars. All patients included in the study were reviewed and the various postoperative complications were recorded and statistically compared to the surgeon's grade. Patients' demographics and pre-operative radiographic findings were also noted. **Results** The surgical procedures were performed by seven specialists and 12 residents. In the group of patients treated by the residents, the incidence of postoperative complications was found to be significant with regards to trismus, infection, alveolar osteitis and paraesthesia of the lingual and inferior alveolar nerves. In the group of patients treated by specialists, the incidence of postoperative bleeding was found to be statistically significant. **Conclusion** There is without doubt a relationship between the surgeon's experience and the postoperative complication in third molar surgery. The impact of the findings from this study upon the profession, education and research is as yet unrealised. The ethical and moral implications of our findings are discussed.

## EDITOR'S SUMMARY

Surgery has always held a dramatic, centre-stage role in terms of life experience. Perhaps it stems from the relatively unusual but necessary application of force by one or more humans on another, almost always in times of need or distress but for the benefit of the one under assault. This drama was unquestionably heightened prior to the advent of effective anaesthesia, either local or general, by the associated physical and vocal expressions of acute pain. It is this visual and audible experience which provides part of the heritage of surgery as being accompanied by noisy histrionics either from the patient or to drown out their wails. Interesting too, that in describing their arena of operation surgeons choose to call it 'theatre'.

Concomitantly, the desire from the patient's viewpoint has always been to have the 'best' surgeon 'perform' on them. Pre-anaesthesia this would have meant a combination of speed and

accuracy and even in today's considerably more civilised circumstances these two attributes are still desirable advantages. Arguably both of these are the product of a complex melding of ability, skill, training and experience and it is the balance of these which this paper has sought to analyse in terms of third molar surgery.

What emerges is the fascinating overlap of these sometimes conflicting considerations made more complex still within the added framework of regulatory authority, in the form of the GDC's role of protecting patients and the politically and professionally charged hierarchy of the NHS. The result is reflected in the conclusions of the study itself, the questions it raises and the reaction of a fellow professional in the Comment section for this summary.

From the patient's point of view, and we are all patients at some stage even if it is not for third molar surgery, the starting point remains the wish to be treated

by the best. They would see it as up to us as professionals to define the best, train the best and recruit the best. Asking such questions is a first step to achieving this.

The full paper can be accessed from the *BDJ* website ([www.bdj.co.uk](http://www.bdj.co.uk)), under 'Research' in the table of contents for Volume 209 issue 1.

Stephen Hancocks  
Editor-in-Chief

DOI: 10.1038/sj.bdj.2010.608

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**IN BRIEF**

- There is a relationship between the surgeon's experience and postoperative complications in third molar surgery.
- With careful assessment and treatment planning postoperative complications may be minimised.
- Knowledge of general surgical principles is often learned best through direct observation and/or assisting senior colleagues, building upon information gained from written material.

**COMMENT**

In this study, cases were distributed randomly into two groups of surgeons, specialist or OMFS resident. It is known that residents in OMFS may be solely medically trained and will also have varying degrees of experience (<1 year-5 years). Specialists may also have a significantly varying degree of training and experience. No clarification is provided of the degree of supervision of trainees undertaken and the Gold Guide recommendations of consultant lead supervision. All these factors will have a significant effect on surgical outcomes assessed in this study.

Indications for surgery were commonly pain, swelling and infection, two of which are clinical signs, and none are explicit indications for third molar surgery (TMS). This is reinforced by the fact that the majority of teeth were partially impacted therefore very likely to be associated with pericoronitis, however, the specialists removed 74% of fully impacted teeth, a worrying statistic, implying prophylactic surgery which is not recommended by NICE.

Aside from the eruption status of the teeth there was no specified method of assessment of the surgical difficulty of extractions, which would have improved the study design. The authors report a significant increase in complications in cases treated by trainees, including trismus, sore throat, delayed healing, alveolar osteitis and postoperative infection. They suggest this is likely to be associated with the increased proportion of female cases

treated by the trainees but it is more likely to be due to inadequate training and supervision. Senior surgeons caused significantly more post-op bleeding but no explanation is provided. All of these results reiterate the findings from the previous paper. Alarmingly, the trainees were 20 times more likely to cause IAN and LN injury even though no actual incidence or nerve injuries are quoted. Also the lack of further radiographic assessment and appropriate surgical techniques, for example coronectomy, probably significantly contributed to nerve injury in this cohort of patients.

The authors state that TMS forms an integral element of training for oral and maxillofacial surgery which is a medical specialty. I would suggest that TMS underpins training in oral surgery in departments where trainers are specifically trained in oral surgery and have up to date knowledge of techniques in preventing nerve injury and other related complications. This study highlights issues with possible increased morbidity associated with training in surgery but due to the study design, overlooking several key aspects, rather highlights ongoing deficiencies in third molar surgical training better placed in the specialist oral surgery setting.

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**AUTHOR QUESTIONS AND ANSWERS****1. Why did you undertake this research?**

The relationship between a surgeon's experience and the incidence of postoperative complications after third molar surgery is assessed in this prospective clinical study. Previous reports have shown this to be one of the most influential factors on surgical outcome. The impact of the findings from this study upon the profession, education and research is as yet unrealised.

**2. What would you like to do next in this area to follow on from this work?**

This study reviews the effect of experience on the outcome of patients undergoing surgical extraction of third molar teeth. This is one of the most common procedures performed in oral and maxillofacial surgery (OMFS). The paradigm may easily be extended to other common operations such as adenoidectomy, tonsillectomy and middle ear surgery (including insertion of grommets). In their entirety they form the majority of the surgical procedures carried out each year in the United Kingdom.

Further research into the influencing factors and prevention of complications is necessary. All clinicians develop their skill base with experience and even if OMFS residents are closely supervised, it is impossible to eliminate the complications outlined in this study. This study also shows that complications do occur in patients treated by more senior surgeons.