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Opinion

From Force to Finesse: 'Tricks' and Minimally Invasive Strategies for Complex Impacted Third Molar Extractions

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Opinion

For generations the surgical removal of impacted third molars has been framed as a rite of passage – one that separates the unexperienced from the experienced clinician. If you ask any oral surgeon about the early years of their career, you will likely hear stories of "stubborn mandibular thirds", the need for big force, very long surgical time and occasionally complications that leave a bad lasting impression for surgeon but mainly for patients who had post operative complications they have never forgotten.

Alongside these narratives, there comes a familiar term: "tricks". Small things that make a whole difference and that you can only learn with time, a lot of practice and with experience-driven manoeuvres passed from mentor to trainee, often informally.

Nowadays, in an era defined by precision medicine, digital planning and patient-centred care, it may be time to ask ourselves: do we still need "tricks" or should we be reframing them all together? In my way of thinking we should not dismiss the value of experiential knowledge, on the contrary what we have historically labelled as "tricks" often reflect nuanced clinical judgement. However, the very use of the term may be holding the profession back because it implies improvisation, even guesswork in a field that is increasingly guided by scientific evidence, imaging and refined medical techniques. Due to this perhaps it would be better to call them micro-strategies - small deliberate decisions that collectively transform outcomes into better ones.

The Myth of Force

One of the most persistent misconceptions in third molar surgery is for sure the implicit association between difficulty and force and because of those complex impactions (too deep, horizontal positions or intimately related to the inferior alveolar nerve) some professionals have traditionally approached it with escalating mechanical effort – elevators become tools of increasing magnitude and flaps more extended, bone removal becomes more aggressive and surgical time stretches accordingly. All these issues are the answer to a bad post operative response, like pain, big swelling and increased alveolitis risk.

Yet, let me tell you that force is rarely the answer and more often it is a symptom of insufficient planning or suboptimal execution. Modern surgical philosophy increasingly favours delicacy and skillfulness over force. For example, with controlled odontosection, strategic bone removal and thoughtful sectioning patterns can dramatically reduce the need for brute strength and the strategy lies not in how hard one pulls but in how precisely one prepares the surgical cavity – I call it "space management".

Planning as the Ultimate Advantage

If there is a single development that has redefined third molar surgery in recent years, it is the widespread adoption of 3D imaging – cone beam computed tomography (CBCT) has moved from being an adjunct to becoming an essential component of preoperative

assessment. With that we no longer need to navigate uncertainly, we can visualize with remarkable clarity the spatial relationship between roots and inferior alveolar nerve, roots morphology and curvature, bone fenestrations and all the main adjacent structures that might influence the procedure. Yet, the access to that information does not automatically translate into better outcomes. The real shift lies in how this information is used as a proactive, risk reduction strategy, by planning in advance rather than improvising intraoperatively. In this context my advice is that the most valuable "trick" is anticipation.

Microtechniques That Matter

Besides planning, it is the smallest technical details that distinguish a smooth procedure from a difficult one. Effectiveness of local anaesthesia is essential for the trust of our patients in our work. Also a good flap design (that remains an underappreciated variable) – a well-designed envelope with adequate release and minimal tension can significantly improve visibility and access while reducing postoperative morbidity. Likewise, although traditional rotary instruments remain effective, piezoelectric surgery has increased power particularly in high risk cases. This is due to its ability to selectively cut mineralised tissue while preserving soft structures offering a level of control that aligns with contemporary surgical goals. Even the luxation method can give the surgeon benefits like refinement with the use of smaller and more precise elevators, applied in a controlled and progressive way, in the right direction (which contrasts sharply with the force that once characterised complex extractions).

Technology: Tool or Crutch?

From digital planning software to guided surgery and even emerging applications of artificial intelligence, the possibilities are expanding rapidly and there is no doubt that these tools can enhance accuracy and confidence mainly in highly complex or unusual cases. Still, technology is not a substitute for clinical judgement and overreliance on digital tools may paradoxically erode the very skills that define surgical expertise. The challenge, in my opinion, is not whether to adopt technology but how to integrate it thoughtfully in order to empower us - the most effective clinicians will be those who use technology as an extension of their understanding and not as a replacement for it.

Preventing complications as a Tool to Choose the Technique

Alveolar osteitis, infection, nerve injury and in rare cases mandibular fracture remain part of the surgical complications and traditionally their management has been reactive. The most effective approach views complication prevention as integral to technique.

Atraumatic handling of tissues, adequate irrigation, minimisation of surgical time and appropriate postoperative instructions all play a role. Even pharmacological adjuncts such as chlorhexidine rinses or corticosteroids may further reduce risk in selected cases.

We should never forget that our patients don't have to know the post operative instructions and so I consider that the most valuable "tricks" are those that the patient never sees - they are embedded in the process not the outcome.

The Human Factor

Despite advances in imaging and instruments, third molar surgeries remain a human endeavour – experience matters and so does humility.

There is a tendency particularly among less experienced clinicians to view difficult cases as challenges to be conquered. While confidence is essential, it must be balanced with self-awareness - knowing when to ask for help, when to refer, when to modify the plan or even to stop is as important as technical skill.

For me, as a mentorship, the transmission with clarity of "tricks" from senior to junior colleagues plays a huge role on surgical training.

A Shift in Language or a Mindset

Do "tricks" have a place in modern oral surgery? Does the term itself still serve us?

When we speak of tricks we evoke an image of improvisation - solutions devised in the moment. When we speak of strategies, techniques or principles we emphasise intention, planning, and reproducibility. What I mean is that third molar surgery is no longer defined by force and endurance but by precision and foresight. The clinician is not a problem-solver reacting to difficulty but a strategist anticipating and mitigating it.

Conclusion

The removal of complex impacted third molars will likely never be entirely predictable.

Anatomy varies, patients are different and unexpected challenges will always arise. In this sense there will always be room for adaptability - for the small experience-driven decisions that guide a procedure to a successful outcome but perhaps it is time to remove the notion of "tricks."

What we are witnessing is not the accumulation of clever shortcuts but the evolution of medicine. A move from force to finesse, from improvisation to intention, from tradition to evidence and in that evolution lies an opportunity - not only to improve surgical outcomes but to redefine how we think, how we teach and talk about what we do.

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Conflicts of Interest

No conflicts of interest.