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Ethics And Decision-Making In Third Molar Removal In Elderly Patients

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Abstract

Third molar (wisdom tooth) management in elderly patients raises clinical, ethical, and medico-legal challenges. As age increases, the balance between the potential benefits of removal (resolution of pain, infection, periodontal damage) and the increased risks of surgery (complications, slower healing, comorbidities) changes. This narrative review synthesizes literature from the last 10–15 years (2010–2025), highlights ethical frameworks for shared decision-making, discusses risk stratification, consent capacity (including cognitive impairment), alternatives (conservative management, coronectomy), and offers practical recommendations for clinicians. The paper aims to provide an evidence-based, ethically grounded approach for oral surgeons and dentists faced with decisions about third molar treatment in older adults.

Keywords

Third molar; wisdom tooth; elderly; ethics; decision-making; informed consent; coronectomy; risk stratification

1. Introduction

Third molar removal is among the most common oral surgical procedures. While prophylactic removal in young adults remains controversial, the management of third molars in middle-aged and elderly patients (commonly defined as >40–65 years depending on the study) presents specific clinical and ethical questions. Older patients more frequently present with comorbidities, medication exposures (anticoagulants, antiplatelets), and altered anatomy (ankylosis, root proximity to neurovascular bundles) that increase surgical risk and morbidity.

2. Scope and methods

This review searched PubMed/PMC, Scopus and professional association white papers for English language articles published from 2010 to 2025, using combinations of terms: “third molar”, “wisdom tooth”, “elderly”, “older adults”, “complications”, “consent”, “ethics”, and “coronectomy”. Case series, cohort studies, systematic reviews, practice guidelines, and ethics papers were prioritized. The goal was to synthesize clinical evidence together with ethical analysis to inform practice.

3. Clinical evidence: outcomes and risks in older adults

3.1 Incidence and indications

Indications for third molar removal in older adults are most frequently symptomatic disease — pain, infection (pericoronitis), caries in the third or adjacent second molar, periodontal problems, and cystic/change in adjacent bone — rather than prophylaxis.2,3

3.2 Age and complication rates

Multiple observational studies and matched-pair analyses demonstrate higher rates of postoperative complications (delayed healing, alveolar osteitis/dry socket, infection, prolonged trismus, and inferior alveolar nerve injury) in patients whose surgery is performed later in life compared with younger cohorts. The absolute risk varies with study design, but the direction of effect is consistent: older age is associated with increased morbidity and often more difficult surgical access due to ankylosis and reduced bone plasticity.4,5

3.3 Comorbidities and medications

Cardiovascular disease, diabetes, anticoagulant/antiplatelet therapy, osteoporosis treatments, and cognitive impairment all alter perioperative risk and postoperative care needs. Polypharmacy increases the chance of drug interactions and bleeding complications. Shared decision-making must explicitly incorporate these medical factors.6

3.4 Alternatives to extraction: coronectomy and conservative management

Coronectomy (intentional retention of roots where nerve proximity is high) has emerged as a risk-mitigation strategy in select older patients with high risk of inferior alveolar nerve injury. Longer-term follow up suggests acceptable outcomes in appropriately selected cases, but risks of root migration and need for secondary surgery exist.7

4. Ethical principles applied to third molar decisions

Clinical decisions should be grounded in the four fundamental principles of biomedical ethics: beneficence, non-maleficence, respect for autonomy, and justice. For elderly patients these principles interact with geriatric considerations (frailty, life expectancy, functional goals) in ways that demand individualized care planning.

4.1 Beneficence and non-maleficence

The clinician must balance potential benefits (symptom relief, elimination of infection source, prevention of future deterioration of adjacent teeth) against harms (intra- and postoperative complications, functional decline). When harms are likely to outweigh benefits given age and comorbidity, non-operative management may better satisfy ethical duties.

4.2 Autonomy and capacity

Respecting autonomy requires ensuring that patients (or their lawful decision-makers) are provided with understandable information about risks, benefits, and alternatives. Assessment of decision-making capacity is essential, especially where cognitive impairment or dementia is present; surrogate decision-makers must operate in the patient's best interests and where possible according to previously expressed wishes.8

4.3 Shared decision-making

Shared decision-making (SDM) is recommended: clinicians should elicit patient values (e.g., desire for definitive treatment vs. avoidance of surgical risk), present individualized risk estimates, and collaboratively choose a plan. SDM tools and decision aids can help—but must be adapted for health literacy and cognitive status.9

4.4 Justice and access to care

Older adults may face barriers to accessing specialist oral surgery; equity demands that decisions are not biased by age alone. However, resource allocation and system-level considerations (e.g., operating theatre prioritization for high-risk patients) may influence timing and location (hospital-based vs office-based) of care.

5. Informed consent: practical and legal considerations

A robust informed consent process for elderly patients should include:

- Clear explanation of diagnosis and natural history if untreated.
- Individualized description of risks (including quantified estimates where possible), tailored to the patient's comorbidities.
- Discussion of alternatives (conservative care, coronectomy, watchful waiting) and their respective risks/benefits.
- Documentation of capacity assessment; if capacity is lacking, documentation of surrogate authority (power of attorney, legal guardian) and best-interest rationale.
- Consideration of postoperative support needs (home care, caregivers) and ability to comply with postoperative instructions.

Studies of consent practices in surgical dentistry reveal variable levels of patient comprehension and recall; older age and cognitive impairment further reduce recall, underscoring the need for written materials and, where appropriate, involvement of family or caregivers.10

6. Decision frameworks and risk stratification

A practical clinician workflow includes:

1. Comprehensive medical and medication review.
2. Radiographic risk assessment (CBCT or panoramic imaging for nerve proximity, depth, root morphology) and assessment for ankylosis.
3. Evaluation of indications (symptomatic vs asymptomatic pathology) and likely benefit horizon relative to life expectancy and functional priorities.

4. Consideration of alternatives (coronectomy, antibiotics/irrigation, extraction in hospital under general anaesthesia if high risk).

5. Explicit conversation about postoperative care demands and caregiver availability.

6. Documentation and, if relevant, involvement of a multidisciplinary team (physician, geriatrician, anesthesiologist).11

7. Special populations: cognitive impairment and dementia

Decision-making capacity fluctuates in some older adults. When dementia is present, decisions should center on current best interests, previously expressed preferences (advance directives), and the minimal-harm option. Invasive procedures with high morbidity and limited benefit may be ethically inappropriate if they contravene the patient's values or impose disproportionate burdens.12

8. Medico-legal and documentation recommendations

Detailed records of the consent discussion, capacity assessment, the rationale for the chosen management plan, and postoperative instructions are essential. In high-risk cases, consider multidisciplinary notes and hospital consent forms. When surgery is deferred, document reasons and safety-netting instructions.

9. Practical recommendations for clinicians (summary)

- Do not use chronological age alone to deny or recommend extraction; use individualized risk–benefit analysis.
- Prioritize removal for symptomatic disease; be cautious with prophylactic extraction in older adults.
- Use detailed radiographic assessment; consider coronectomy when nerve proximity is high and removal would carry significant IAN risk.
- Assess capacity explicitly; involve surrogates and document thoroughly when capacity is impaired.
- Engage in shared decision-making, using plain language decision aids and written summaries for the patient/caregivers.
- Coordinate with medical colleagues for complex comorbid conditions and perioperative medication management (anticoagulants, diabetes control).

10. Research gaps and future directions

High-quality prospective data specifically addressing outcomes of third molar surgery in older adults remain limited. Areas needing research include:

- Prospective risk prediction models that integrate age, comorbidity, radiographic features, and surgical complexity.
- Randomized evidence (where ethical and feasible) comparing coronectomy vs extraction in older cohorts.
- Decision aids tailored to older adults and their caregivers, with validation of comprehension and outcomes.

- Studies on long-term outcomes of retained asymptomatic third molars in the elderly, including impact on adjacent teeth and prosthodontic plans.

11. Conclusion

Third molar management in older adults requires careful balancing of clinical evidence and ethical principles. A patient-centred, individualized approach that emphasizes shared decision-making, capacity assessment, and clear documentation will best align care with patient values while minimizing harm.

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