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Nursing Care Considerations in Submandibular Salivary Gland Excision

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Abstract

Background: The submandibular salivary glands play a vital role in baseline saliva production, and their dysfunction commonly leads to obstructive and inflammatory conditions requiring surgical intervention.

Aim: This article aims to comprehensively review nursing care considerations associated with submandibular salivary gland excision, emphasizing anatomy, indications, surgical technique, complications, and interprofessional care.

Methods: A narrative educational review was conducted, synthesizing current anatomical, physiological, and clinical knowledge related to submandibular gland excision, with particular focus on perioperative nursing responsibilities.

Results: Recurrent sialolithiasis, chronic sialadenitis, neoplasms, and refractory sialorrhea were identified as primary indications for excision. Surgical success depends on meticulous technique and preservation of critical neurovascular structures. Postoperative nursing monitoring is essential for early detection of complications such as hematoma, infection, and nerve injury.

Conclusion: Effective nursing assessment and interprofessional collaboration significantly enhance patient safety, functional recovery, and overall outcomes following submandibular gland excision.

Keywords: Submandibular gland, sialolithiasis, gland excision, nursing care, salivary disorders

Introduction

Saliva performs essential physiological roles, encompassing enzymatic digestion initiation, chemical buffering to prevent dental caries and facilitate enamel remineralization, and lubrication of the oral cavity and pharynx, which supports speech articulation, swallowing, and gustatory sensation [1][2]. The major salivary glands, consisting of the parotid, submandibular, and sublingual glands, are paired structures with distinct functional contributions. Although the parotid glands are the largest, the submandibular glands are primarily responsible for baseline salivary secretion, while the parotids become more active during mastication [3]. Minor salivary glands, including the recently characterized tubarial glands located in the nasopharynx, are widely distributed throughout the mucosa of the upper aerodigestive tract, contributing to mucosal lubrication and local enzymatic activity [4]. Each salivary gland exhibits unique exocrine properties, secreting specific ratios of serous and mucinous fluids that determine both physiological function and susceptibility to disease. The submandibular gland produces a mixed seromucinous secretion, providing both enzymatic activity and lubricative properties. In contrast, the parotid gland primarily generates serous, enzyme-rich saliva, while the sublingual gland secretes predominantly mucinous, viscous saliva that facilitates lubrication [5]. These compositional differences influence not

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only normal physiology but also the pathogenesis of salivary disorders, including sialolithiasis and chronic sialadenitis. Disruption of normal salivary flow, due to dehydration, ductal obstruction, or age-related changes, can increase saliva viscosity and promote calculus formation. Salivary stones exhibit variable composition depending on their site of origin; submandibular calculi commonly consist of 70% to 80% inorganic material and 20% to 30% organic constituents, including proteins (approximately 5%), lipids (1%), and carbohydrates [6][7]. Impaired salivary clearance further predisposes patients to infection, which frequently presents in urgent and emergency care settings. Recurrent obstructive sialolithiasis, particularly when associated with bacterial sialadenitis or persistent symptoms, represents a compelling indication for submandibular gland excision. This intervention is critical in alleviating recurrent morbidity, restoring oral function, and preventing complications, and will be examined in detail throughout this educational module.

Anatomy and Physiology

The submandibular glands are paired salivary structures situated within the submandibular triangle, an anatomically defined region of the neck. This triangle is bordered superiorly by the inferior margin of the mandible, posteroinferiorly by the posterior belly of the digastric muscle, and anteroinferiorly by the anterior belly of the digastric. The mylohyoid muscle forms the deep boundary, whereas the platysma constitutes the superficial limit. The gland itself is bilobed, curving around the posterior border of the mylohyoid; the superficial lobe resides beneath the mandible, while the deep lobe extends into the floor of the mouth adjacent to the medial hyoglossus muscle [8]. The excretory duct, or Wharton duct, arises from the deep lobe, traverses the floor of the mouth, and opens at the sublingual papilla lateral to the lingual frenulum. This orientation necessitates active propulsion of saliva via myoepithelial contraction and contributes to the predisposition of the submandibular gland to sialolithiasis. The duct is typically 5 cm in length and 0.5–1.5 mm in diameter, crossing the lingual nerve and passing medial to the sublingual gland [9]. The vascular and neural relationships of the submandibular gland are critical for surgical planning. The superficial lobe is enveloped by the investing layer of the deep cervical fascia, with the facial artery and vein coursing along this layer. The marginal mandibular branch of the facial nerve lies superficially to the vein, innervating muscles of the lower lip and chin. Intraoperative exposure, such as during the Hayes Martin maneuver, requires careful dissection to protect this nerve while allowing mobilization of the gland. The gland receives its primary arterial supply from the facial artery, supplemented by the lingual artery, with venous drainage predominantly through the facial vein into the internal jugular system [10]. Medially, the submandibular ganglion communicates with the lingual nerve, providing parasympathetic innervation, while the hypoglossal nerve courses inferiorly and posteriorly, necessitating careful identification during surgical excision.

Physiologically, salivary secretion from the submandibular gland is under autonomic regulation. Parasympathetic fibers originate in the superior salivatory nucleus of the pons, travel via the facial nerve through the chorda tympani, join the lingual branch of the mandibular nerve (CN V3), and synapse at the submandibular ganglion. Postganglionic fibers stimulate secretion and vasodilation, whereas sympathetic fibers from the superior cervical ganglion traverse a plexus along the carotid sheath, following the facial artery to induce vasoconstriction and reduce salivary flow. The gland produces a mixed seromucinous secretion, primarily water (98–99%) with glycoproteins, enzymes including amylase and lysozyme, immunoglobulin A, lipids, epithelial and white blood cells, and electrolytes. These constituents can aggregate with hydroxyapatite and other calcium salts to form calculi [11]. Pathological conditions affecting the submandibular glands are diverse. Acute disorders typically involve obstruction or infection. Calculi, ductal strictures, or bacterial infection commonly result in unilateral sialadenitis, with pathogens such as Staphylococcus aureus, Streptococcus pyogenes, Haemophilus influenzae, and viridans streptococci. Bilateral infections are more often viral, associated with mumps, coxsackievirus, parainfluenza, or HIV. Chronic disorders include neoplasia, autoimmune disease, infiltrative processes such as amyloidosis or granulomatous disease, and idiopathic glandular enlargement. Approximately 75% of submandibular tumors are benign, most commonly pleomorphic adenomas, whereas malignancies comprise 25%, frequently presenting as adenoid cystic carcinoma, mucoepidermoid carcinoma, or adenocarcinoma [12][13][14]. Understanding the complex anatomical relationships, vascular supply, neural connections, and secretory physiology is essential for both clinical assessment and the safe surgical excision of the submandibular gland.

Indications

Submandibular gland excision is primarily indicated in patients with chronic or recurrent obstructive sialadenitis secondary to sialolithiasis. Salivary stones, particularly those causing repeated ductal obstruction, lead to inflammation, pain, and swelling of the gland, necessitating definitive intervention. While transoral removal of isolated calculi in the submandibular duct can be successful in select cases, particularly when stones are small and easily accessible, most patients experience recurrent obstruction and infection that do not respond adequately to conservative or minimally invasive approaches. Sialendoscopy has emerged as a widely

used technique that serves both diagnostic and therapeutic purposes, particularly for stones smaller than 7 mm in diameter. This endoscopic procedure allows for direct visualization and extraction of calculi with reduced morbidity. Nevertheless, persistent or complex cases frequently require complete submandibular gland excision to prevent ongoing sialadenitis and associated complications [15]. Submandibular gland excision may also be indicated for refractory sialorrhea in conditions such as cerebral palsy or congenital syndromes, particularly when conservative measures, including pharmacologic therapies and botulinum toxin injections, have failed. In these instances, the procedure is often performed bilaterally and may be combined with parotid duct ligation to optimize long-term outcomes in reducing excessive salivary production [16]. Additionally, partial or complete submandibular gland excision may be undertaken for cosmetic reasons during cervicofacial rhytidectomy. Age-related ptosis of the submandibular gland can cause unsightly fullness in the upper neck, obscuring the normal jawline. Surgical removal or suspension of the gland, in conjunction with soft tissue repositioning, restores aesthetic contour and improves the definition between the lateral mandibular margin and the upper neck [17].

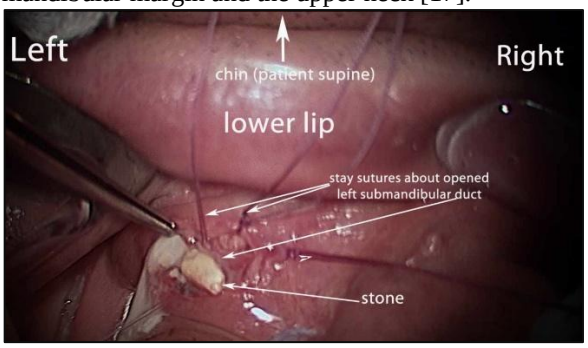

Fig. 1: Submandibular Gland Calculi.

Neoplastic disease represents another critical indication for submandibular gland excision. Tumors, whether benign or malignant, may necessitate complete gland removal. A thorough preoperative assessment is essential, as malignancies may require additional procedures, including formal neck dissection, depending on tumor type, histopathology, and staging. Evaluation begins with a detailed history addressing symptom onset, duration, laterality, and associated systemic features, including autoimmune or viral etiologies. Prior exposure to external beam radiation or radioactive iodine therapy should also be documented, as these can compromise salivary function and predispose the gland to chronic xerostomia and altered secretion [18]. Clinical examination focuses on the oral cavity and submandibular triangle. Bimanual palpation of the floor of the mouth allows detection of intraductal calculi, while inspection and palpation of the neck identify masses, lesions, or lymphadenopathy. Facial nerve assessment, particularly the marginal mandibular branch, is crucial to evaluate baseline function before surgical intervention. Preoperative imaging, including ultrasonography or contrast-enhanced computed tomography, is employed to delineate the gland, visualize calculi, and characterize neoplastic lesions. In cases of suspected malignancy, cytological evaluation through fine needle aspiration or core needle biopsy is performed under ultrasound guidance. Core needle biopsy provides a larger tissue sample, increasing diagnostic accuracy but carries a higher risk of bleeding or other procedural complications [19][20]. Comprehensive preoperative assessment, including history, physical examination, imaging, and tissue sampling when appropriate, ensures that submandibular gland excision is indicated, safely planned, and tailored to the patient's underlying pathology, whether obstructive, neoplastic, or cosmetic in nature.

Contraindications

While submandibular gland excision is generally a safe and effective procedure, several relative contraindications must be carefully considered prior to surgical intervention. The presence of a malignant neoplasm within or adjacent to the gland represents a critical factor that may alter the surgical approach. In such cases, simple gland excision may be insufficient, as comprehensive management often requires adjunctive procedures including formal neck dissection, radiation therapy, or chemotherapy. Addressing malignancy without appropriate staging and planning can compromise oncologic outcomes and increase the risk of recurrence, emphasizing the need for thorough preoperative assessment [15]. Acute infection in the submandibular region is another relative contraindication, as active inflammation increases tissue friability, obscures normal anatomical landmarks, and complicates dissection. Attempting excision in the presence of infection can result in increased intraoperative bleeding, nerve injury, or incomplete removal. Preoperative treatment with appropriate antibiotics and resolution of infection is recommended to optimize surgical conditions and reduce postoperative complications [16]. Patient-specific medical considerations also influence eligibility for excision. The procedure is typically performed under general anesthesia, and patients with significant comorbidities, advanced age, or compromised cardiopulmonary function may be at increased risk during anesthesia. In such cases, conservative measures, including sialendoscopy, transoral stone removal, or pharmacologic management, may be preferable. Additionally, anatomical or functional limitations, such as trismus or restricted mouth opening, can impede visualization and access to the submandibular space, contraindicating intraoral or certain transcervical approaches. Preoperative evaluation should therefore

include assessment of airway access, mouth opening, and overall patient fitness for anesthesia to ensure both safety and technical feasibility. Recognizing these relative contraindications allows clinicians to tailor the treatment approach, ensuring that submandibular gland excision is undertaken in patients for whom the procedure is both safe and likely to achieve optimal functional and aesthetic outcomes.

Equipment

Submandibular gland excision requires a comprehensive set of surgical instruments and ancillary devices to ensure precision, hemostasis, and safe dissection of delicate neurovascular structures. Standard surgical instruments include a #15 scalpel blade mounted on a #3 Bard-Parker handle, which provides precise control for initial skin incisions and flap elevation. Forceps, including DeBakey and Adson types, facilitate atraumatic tissue handling, while Babcock, Allis, and Crile clamps are essential for temporary vessel control and tissue retraction. Scissors such as Metzenbaum and suture scissors are utilized for fine dissection and precise cutting of soft tissues. The McCabe dissector aids in gentle separation of glandular tissue from surrounding fascia, whereas retractors—including Army-Navy, Greene, and Senn or Ragnell types—maintain exposure of the surgical field. Electrocautery devices, both monopolar and jeweler's bipolar, are employed for coagulation and hemostasis, minimizing intraoperative bleeding. Kittner sponges assist in blunt dissection and absorb blood from the operative site. Needle drivers, including Halsey or Hagar types, are used for secure ligation of vessels and precise suturing. Suture material for vessel ligation and skin closure, along with topical hemostatic agents, is essential to control bleeding and ensure optimal wound closure. Optional adjuncts include advanced hemostatic devices such as the harmonic scalpel, which allow simultaneous cutting and coagulation, and facial nerve monitoring systems to enhance safety in nerve preservation. Additionally, a sialendoscope with camera, duct dilators, microdrill, and stone retrieval baskets may be used in hybrid procedures for intraductal stone management. All instruments and devices must be inspected, assembled, and tested prior to the procedure to confirm functionality and ensure procedural efficiency [21].

Personnel

Successful submandibular gland excision depends on a coordinated surgical team with defined roles across perioperative care. The procedure is performed under general anesthesia, necessitating the presence of an anesthesiologist or nurse anesthetist to manage airway control, hemodynamic stability, and anesthetic depth. The circulating nurse ensures instrument availability, sterile field maintenance, and patient monitoring. The surgical scrub technician or assistant prepares instruments, passes tools efficiently, and assists with tissue retraction. A first assistant is valuable for aiding in exposure, suction, and maintaining hemostasis, particularly in cases with complex anatomy or oncologic involvement. Post-excision, a pathologist evaluates the glandular specimen, particularly when malignancy is suspected, to guide intraoperative and postoperative decision-making. If cancer is identified, multidisciplinary collaboration with medical, surgical, and radiation oncologists becomes essential for staging and planning adjuvant therapy. Radiologists may also be involved preoperatively and postoperatively to assess disease extent and confirm complete excision. This integrated team approach ensures patient safety, accurate diagnosis, and optimal long-term outcomes, highlighting the necessity of effective communication and coordination among all personnel throughout the perioperative period [21].

Preparation

Proper patient preparation is critical for both surgical access and neurovascular safety during submandibular gland excision. The patient is positioned supine with a shoulder roll to achieve gentle neck extension, optimizing exposure of the submandibular triangle. The head is rotated contralaterally, and in some cases, the operating table may be rotated 90° toward the operative side to enhance working space and instrument maneuverability. The operative field is prepped and draped widely, typically extending from the nasolabial fold superiorly to the clavicles inferiorly, ensuring sterile coverage and accessibility. The endotracheal tube is secured to the contralateral side, allowing unobstructed monitoring of the ipsilateral oral commissure for twitching that may indicate stimulation of the marginal mandibular or cervical branches of the facial nerve. Long-acting paralytic agents are avoided to permit intraoperative observation of facial and tongue movement, particularly when electrical nerve monitoring is utilized. Although prophylactic antibiotics are not routinely indicated for clean head and neck procedures, they should be immediately available if intraoperative infection or abscess is encountered. Meticulous preparation of both patient positioning and sterile field enhances visibility, access, and operative safety, while allowing for careful preservation of critical structures such as the facial nerve, lingual nerve, and vascular supply [21].

Technique or Treatment

Excision of the submandibular gland is a delicate surgical procedure requiring meticulous planning, precise dissection, and comprehensive knowledge of regional anatomy to ensure optimal outcomes and minimize complications. The standard transcervical approach typically begins with the design of a 2- to 3-cm transverse incision in the upper neck, positioned along the inferior margin of the submandibular gland approximately 1 to 2 cm below the mandible. This placement allows adequate

exposure of the gland while maximizing cosmetic outcomes by utilizing existing skin creases whenever possible. Local anesthetic infiltration along the planned incision line is performed with caution to avoid the marginal mandibular and cervical branches of the facial nerve, thereby mitigating unwanted nerve blockade and preserving intraoperative neural feedback that signals potential injury [22][23]. The marginal mandibular branch exits the inferior portion of the parotid gland, courses over the submandibular gland, and crosses the mandibular margin at the gonial notch to supply the perioral musculature. The cervical branch, traveling superficially beneath the platysma, is reliably encountered approximately 1 cm below the midpoint between the mastoid process and the mentum. Proper nerve identification and protection are critical, as iatrogenic injury can result in functional deficits and aesthetic compromise. In malignant cases requiring neck dissection, the incision may be extended inferiorly to facilitate comprehensive access, with careful attention to preserve neural structures. Surgeons may elevate subplatysmal or supraplatysmal skin flaps depending on preference and intraoperative assessment, often splitting platysma fibers vertically to improve visualization of the marginal mandibular nerve overlying the gland [22][23].

Dissection proceeds with identification of the facial artery and vein. The facial vein can be ligated and reflected superiorly to shield the marginal mandibular nerve, while preservation of the artery is preferred if feasible, as its tortuous course and intraglandular branches can complicate surgical maneuvers. Separation of the gland from surrounding structures is performed in a subfascial plane to reduce the risk of nerve injury, advancing from the inferior mandibular border to the mylohyoid muscle. The anterior aspect of the superficial lobe is mobilized away from the anterior belly of the digastric muscle, while care is taken to avoid injury to the motor nerve supplying this muscle. The posterior lobe is dissected from the posterior belly of the digastric, with the facial vein either retracted or ligated. Retraction of the posterior border of the mylohyoid exposes the deep lobe and allows identification and protection of the lingual nerve, critical for preserving taste and sensation on the ipsilateral oral tongue. The submandibular ganglion is carefully separated from the gland to prevent neural compromise. The Wharton duct and accompanying vein are isolated, with the vein ligated and the duct transected as close as possible to its sublingual papilla to prevent residual calculi. Deeper dissection ensures preservation of the hypoglossal nerve, which serves as an anatomical landmark for identifying the duct. The gland is then delivered after blunt release of remaining attachments, sometimes aided by intraoral pressure, with continuous confirmation of marginal mandibular nerve integrity. Hemostasis is meticulously achieved, and a suction drain is typically placed before layered closure of the wound [23][24][25].

Alternative surgical approaches have been developed to minimize external scarring and facilitate minimally invasive interventions. Intraoral, endoscopy-assisted, and robot-assisted techniques offer viable options for patients seeking to avoid neck incisions. The intraoral approach is particularly suitable for proximal ductal stones or strictures but requires careful navigation around the lingual and hypoglossal nerves. The procedure begins with identification of the sublingual papilla, followed by mucosal incision extending to the retromolar trigone. Often, the sublingual gland is excised to improve exposure. The lingual nerve is dissected free, and the Wharton duct and associated vein are ligated after confirming the hypoglossal nerve's position. Retraction of the mylohyoid muscle exposes the superficial lobe of the gland, which is dissected from the facial vessels and nerve branches, with transcervical pressure applied to facilitate delivery. Closure is completed using resorbable sutures, with drains placed selectively [24][25][26]. The choice between transcervical and intraoral approaches is guided by anatomical considerations, stone location, patient preference, and cosmetic priorities. Across all techniques, the principles of nerve preservation, meticulous hemostasis, and careful tissue handling remain paramount. Mastery of regional anatomy, particularly of the marginal mandibular, cervical, lingual, and hypoglossal nerves, as well as the facial vessels, is essential for safe and effective excision. In addition, intraoperative vigilance for anatomical variations, precise ligation of ducts and vessels, and careful flap management contribute to reduced postoperative complications, optimal functional outcomes, and improved aesthetic results.

Submandibular gland excision, whether performed via transcervical or intraoral approaches, exemplifies the integration of anatomical knowledge, surgical skill, and modern adjuncts such as endoscopy or robotic assistance. The procedure remains the standard intervention for recurrent sialadenitis, obstructive sialolithiasis, refractory sialorrhea, and select neoplasms, balancing efficacy with preservation of neurovascular integrity. Continuous refinement of surgical technique and technological innovation has improved safety profiles, minimized morbidity, and enhanced patient-centered outcomes, while ongoing research continues to expand minimally invasive options for targeted glandular management. This comprehensive understanding of the surgical technique emphasizes the necessity of a stepwise approach, careful preoperative planning, and interdisciplinary coordination to ensure both functional and aesthetic success in submandibular gland excision [24][25][26].

Complications

Submandibular gland excision is generally well-tolerated, but several complications may arise, primarily related to injury of the marginal mandibular, lingual, or hypoglossal nerves. The marginal mandibular branch is particularly vulnerable due to its superficial course over the submandibular gland. Temporary neuropraxia is reported in up to 15.6% of cases, with full functional recovery typically occurring within weeks to months. Permanent lower lip weakness is less common, reported in approximately 2.2% of procedures, and may result in asymmetry during smiling or speech [27]. Injury to the hypoglossal or lingual nerves is rare, occurring in fewer than 2% of cases, but can lead to dysgeusia, lingual sensory deficits, or impaired tongue mobility, which may affect speech, mastication, and swallowing [28]. Postoperative hematoma represents another significant risk. Ligation of the facial artery and vein is crucial, as uncontrolled bleeding may accumulate in the operative site and exert pressure on surrounding structures, potentially compromising the airway. Immediate recognition and management of hematoma formation are essential to prevent airway obstruction and hemodynamic instability. Wound healing complications, including infection, dehiscence, and seroma formation, occur in approximately 7% to 22% of cases, consistent with outcomes observed in comparable cervical surgical procedures. Scar formation, although often minimized by aligning incisions along natural skin creases, may be considered aesthetically undesirable by some patients, especially in the context of inflammation or infection at the time of surgery [27]. Xerostomia following unilateral submandibular gland excision is uncommon, as the contralateral submandibular and parotid glands typically compensate for decreased salivary output. Nevertheless, long-term effects on salivary flow and oral health remain under investigation, particularly in patients with preexisting salivary dysfunction or prior irradiation [29]. Other less frequent complications include injury to small perforating vessels, which can contribute to localized edema or hematoma, and adverse reactions to anesthesia. Awareness of these potential complications, coupled with meticulous surgical technique and careful postoperative monitoring, is essential for optimizing patient outcomes and minimizing long-term morbidity associated with submandibular gland excision.

Clinical Significance

Submandibular gland pathologies represent a significant clinical concern, with an estimated annual incidence of approximately 60 cases per 100,000 individuals. These disorders are frequently encountered in primary, emergency, and specialty care settings, necessitating prompt recognition and appropriate intervention by otolaryngologists, head-and-neck surgeons, and other healthcare professionals [30]. Salivary calculi are among the most common indications for gland excision, affecting up to 1% of the population. While many stones are asymptomatic, they may lead to recurrent sialadenitis, ductal obstruction, and associated pain, making timely diagnosis and management critical to prevent complications. Acute suppurative sialadenitis, although rare, presents significant morbidity and carries a reported mortality of up to 40% when severe or untreated, underscoring the need for early recognition and aggressive management [31][32]. The clinical importance of submandibular gland excision extends beyond urgent care, encompassing chronic conditions such as recurrent sialolithiasis, refractory sialorrhea, and neoplastic lesions. Excision serves both therapeutic and prophylactic purposes, preventing ongoing infection, obstruction, and tissue damage. In oncologic cases, gland removal is often combined with neck dissection to address potential nodal metastases, highlighting the procedure's significance in comprehensive head-and-neck cancer management. Additionally, understanding the anatomy, physiology, and potential complications of the gland allows clinicians to weigh the risks and benefits of surgical intervention against conservative measures, guiding informed decision-making for patients and families. Healthcare providers must also recognize the broader impact of submandibular gland disorders on quality of life. Chronic pain, recurrent infection, impaired mastication, and difficulty swallowing may significantly affect nutrition, communication, and psychosocial well-being. Early intervention, whether through conservative or surgical measures, mitigates these effects and enhances patient-centered outcomes. Given the prevalence and potential severity of salivary gland pathologies, continued education and awareness are essential for clinicians at all levels to ensure timely referral, effective treatment, and optimal long-term functional and cosmetic results [32][33].

Enhancing Healthcare Team Outcomes

Optimal outcomes in submandibular gland management rely on coordinated, interprofessional care. Surgeons lead procedural planning and execution, but patient recovery depends on a broader team of clinicians, including anesthesiologists, nurses, pharmacists, and allied health providers. Nurses play a pivotal role in monitoring postoperative patients, observing early signs of hematoma, infection, or nerve injury. Prompt recognition of complications facilitates timely interventions, such as drainage of hematomas or referral for facial nerve repair and prevents progression to airway compromise or permanent functional deficits [34]. Pharmacists contribute by ensuring appropriate perioperative medication management, including analgesics and, when indicated, prophylactic or therapeutic antibiotics. Physical and occupational therapists support functional recovery in patients with temporary or

permanent nerve deficits, particularly addressing issues with mastication, speech, and oral mobility. Radiologists assist in preoperative evaluation, identifying calculi, ductal obstructions, or neoplastic lesions that inform surgical planning. Pathologists provide intraoperative and postoperative evaluation, especially in suspected malignancy, to confirm diagnosis, margin status, and the need for further intervention. Interprofessional communication and collaboration enhance decision-making, ensuring all team members remain aligned on treatment goals. Regular case discussions, updates on patient progress, and coordination of follow-up care are essential, particularly for high-risk patients, such as those with diabetes, prior radiation exposure, or compromised immune status. Implementing structured care pathways that include standardized postoperative monitoring protocols, nerve function assessments, and wound care guidelines further improves patient safety, reduces complication rates, and promotes optimal functional and aesthetic outcomes following submandibular gland excision [34].

Nursing, Allied Health, and Interprofessional Team Monitoring

Nursing staff must maintain a high level of vigilance in the postoperative period, focusing on early detection of complications that may compromise outcomes. Active monitoring for hematoma formation, particularly around the facial artery and vein, is crucial, as prompt intervention may prevent airway obstruction or significant blood loss. Nurses are also responsible for assessing wound integrity, recognizing signs of infection, and ensuring that drains, if present, function appropriately. Accurate documentation and communication of changes in patient status allow for rapid escalation to the surgical team when indicated. Attention to nerve function is another essential aspect of postoperative care. Observation for lower lip weakness, altered tongue sensation, or dysgeusia facilitates early identification of marginal mandibular, lingual, or hypoglossal nerve injury. Timely intervention may involve conservative measures, such as pharmacologic therapy with agents like oral nimodipine, or surgical exploration when indicated [34]. Education of patients regarding expected sensory changes, functional limitations, and signs warranting urgent medical attention is critical for patient-centered care. Allied health professionals, including speech and language therapists, may assist in rehabilitating speech or swallowing function in cases of nerve injury, while dietitians can support nutritional intake if oral function is compromised. Interprofessional monitoring ensures that complications are addressed promptly and that recovery is optimized. Structured communication among surgeons, nurses, anesthesiologists, and rehabilitation specialists enables coordinated management, facilitating timely adjustments to care plans. This collaborative approach not only improves patient safety but also supports functional recovery, aesthetic satisfaction, and overall quality of life for individuals undergoing submandibular gland excision [34].

Conclusion:

Submandibular gland excision remains a definitive and effective treatment for recurrent obstructive, inflammatory, and neoplastic salivary gland disorders. A thorough understanding of the gland's anatomy, surgical indications, and potential complications is essential for optimizing patient outcomes. Nurses and allied health professionals play a critical role in perioperative and postoperative care through vigilant monitoring, early identification of complications, patient education, and interdisciplinary coordination. Structured nursing assessment and timely intervention significantly reduce morbidity, support functional recovery, and enhance quality of life. Ongoing education and collaborative teamwork are fundamental to achieving safe, patient-centered care.

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