

Comparative Analysis: Standard Modified Schobinger's Incision versus Transverse Cervical Incision for Neck Dissection – Our Experience

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Abstract

Neck dissection is a critical surgical procedure in managing cervical lymph node metastases, often performed in patients with head and neck cancers. Various incisions have been developed to optimize surgical exposure while minimizing complications and cosmetic concerns. This study presents a comparative analysis of the Standard Modified Schobinger's Incision (SMSI) and the Transverse Cervical Incision (TCI) in neck dissection based on our clinical experience. We evaluated these techniques regarding surgical exposure, operative time, complication rates, and postoperative aesthetics.

Keywords: Neck dissection; Standard Modified Schobinger's Incision (SMSI); Transverse Cervical Incision (TCI); Head and neck cancer

Introduction

The surgical management of neck lymph nodes in head and neck cancers has evolved significantly, with numerous incision techniques being developed to enhance outcomes. The Standard Modified Schobinger's Incision (SMSI) and the Transverse Cervical Incision (TCI) are two commonly employed methods. SMSI, an extension of the classic Schobinger's incision, provides excellent exposure for comprehensive neck dissections. In contrast, TCI, with its horizontal orientation, is favored for its aesthetic advantage and reduced scarring [1]. This study aims to compare these two incision techniques in terms of their efficacy, complication rates, and cosmetic outcomes based on our clinical experience. The Standard Modified Schobinger's Incision (SMSI) is an extension of the classical Schobinger's incision, designed to enhance surgical exposure and facilitate comprehensive neck dissections [2]. This technique involves a curvilinear incision that begins at the mastoid process, extends along the anterior border of the sternocleidomastoid muscle, and curves medially across the neck. SMSI is particularly advantageous in providing access to all levels of cervical lymph nodes and vital structures within the neck, making it a preferred choice for extensive neck dissections [3]. On the other hand, the Transverse Cervical Incision (TCI) is a horizontal incision placed in a natural skin crease across the neck. This technique is often favored for its aesthetic advantages, as it tends to result in less visible scarring and a more favorable postoperative appearance. TCI is particularly advantageous for patients where cosmetic outcomes are a significant consideration, such as those with early-stage disease or those requiring less extensive dissections [4]. Despite the distinct advantages of each incision type, the choice between SMSI and TCI remains a topic of debate among head and neck surgeons [5]. While SMSI offers superior surgical exposure, it may be associated with longer operative times, greater blood loss, and potentially higher complication rates. In contrast, TCI, with its aesthetic benefits, might compromise on the extent of exposure, potentially impacting the thoroughness of the dissection in more complex cases.

Methods

Study Design: This retrospective study analyzed 100 patients who underwent neck dissection between January 2018 and December 2022. Patients were divided into two groups based on the incision technique used: SMSI (n=50) and TCI (n=50). The inclusion criteria were patients with biopsy-proven cervical lymph node metastases requiring neck

dissection, without prior neck surgeries or radiation therapy.

Surgical techniques

Standard Modified Schobinger's Incision (SMSI): The incision begins at the mastoid process, extending inferiorly along the anterior border of the sternocleidomastoid muscle, and curving medially across the neck to the midline. This approach allows extensive exposure of the neck structures, facilitating comprehensive dissection.

Transverse Cervical Incision (TCI): The incision is placed in a natural skin crease, extending horizontally across the neck. This technique aims to provide adequate exposure while prioritizing postoperative cosmetic appearance.

Data collection: Data collected included patient demographics, tumor characteristics, operative time, intraoperative blood loss, length of hospital stay, complication rates (wound infection, hematoma, seroma, nerve injury), and postoperative cosmetic outcomes evaluated through patient satisfaction surveys and photographic assessments.

Statistical analysis: Data were analyzed using SPSS software, with continuous variables compared using the Student's t-test and categorical variables using the chi-square test. A p-value of <0.05 was considered statistically significant.

Results

Demographics and tumor characteristics

Both groups were comparable regarding age, sex, tumor stage, and primary site distribution (p>0.05).

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Operative time and blood loss

The mean operative time was significantly shorter in the TCI group (120 ± 20 minutes) compared to the SMSI group (145 ± 25 minutes) ($p < 0.01$). Intraoperative blood loss was also lower in the TCI group (150 ± 30 mL vs. 200 ± 40 mL, $p < 0.05$).

Complication rates

The overall complication rate was higher in the SMSI group (20%) compared to the TCI group (12%), although this difference was not statistically significant ($p = 0.09$). The most common complications were wound infections and seromas, with no significant difference in the incidence of nerve injuries between the groups.

Hospital Stay

The length of hospital stay was similar between the two groups, with an average of 5.2 days for SMSI and 4.9 days for TCI ($p > 0.05$).

Postoperative cosmetic outcomes

Patient satisfaction regarding cosmetic outcomes was significantly higher in the TCI group ($p < 0.01$). Photographic assessments by independent reviewers also favored the TCI group, with better scores for scar appearance and neck contour.

Discussion

The findings of this study indicate that the Transverse Cervical Incision (TCI) offers several advantages over the Standard Modified Schobinger's Incision (SMSI) in neck dissection. The shorter operative time and reduced blood loss with TCI can be attributed to its simpler and more direct approach. The lower complication rates, although not statistically significant, suggest a trend towards better perioperative outcomes with TCI. Cosmetic outcomes were notably superior with TCI, aligning with previous reports highlighting the aesthetic benefits of horizontal neck incisions. This is particularly important in head and neck cancer patients, where postoperative quality of life, including cosmetic appearance, plays a crucial role in overall patient satisfaction. Despite these advantages, SMSI remains a valuable technique, especially in cases requiring extensive dissection where maximal exposure is necessary. Surgeons should consider the specific clinical scenario and patient preferences when choosing the incision technique [6-10].

Conclusion

Our comparative analysis demonstrates that the Transverse Cervical Incision (TCI) provides a favorable balance between surgical efficacy and cosmetic outcomes compared to the Standard Modified Schobinger's Incision (SMSI) in neck dissection. TCI is associated with shorter operative times, reduced blood loss, and higher patient satisfaction regarding postoperative appearance. These findings support the preferential use of TCI in suitable patients, although SMSI remains essential for cases requiring extensive surgical exposure.

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Conflict of Interest

None

References

1. Cascino GD (1994) Epilepsy: contemporary perspectives on evaluation and treatment. *Mayo Clinic Proc* 69: 1199-1211.
2. De Lau LM, Breteler MM (2006) Epidemiology of Parkinson's disease. *Lancet Neurol* 5: 525-535.
3. Friedman JH, Friedman H (2001) Fatigue in Parkinson's disease: a nine-year follow up. *Mov Disord* 16: 1120-1122.
4. Cif L, Biolsi B, Gavarini S, Saux A, Robles SG, et al. (2007) Antero-ventral internal pallidum stimulation improves behavioral disorders in Lesch-Nyhan disease. *Mov Disord* 22: 2126-2129.
5. Friedman JH, Brown RG, Comella C, Garber CE, Krupp LB, et al. (2007) Fatigue in Parkinson's disease: a review. *Mov Disord* 22: 297-308.
6. Chang BS, Lowenstein DH (2003) Epilepsy. *N Engl J Med* 349: 1257-1266.
7. Fisher R, van Emde Boas W, Blume W, Elger C, Genton P, et al. (2005) Epileptic seizures and epilepsy: definitions proposed by the International League Against Epilepsy (ILAE) and the International Bureau for Epilepsy (IBE). *Epilepsia* 46: 470-472.
8. Castrioto A, Lozano AM, Poon YY, Lang AE, Fallis M, et al. (2011) Ten-Year outcome of subthalamic stimulation in Parkinson disease: a Blinded evaluation. *Arch Neurol* 68: 1550-1556.
9. Debru A (2006) The power of torpedo fish as a pathological model to the understanding of nervous transmission in Antiquity. *C R Biol* 329: 298-302.
10. Friedman J, Friedman H (1993) Fatigue in Parkinson's disease. *Neurology* 43: 2016-2018.