

PAINFUL COMPLICATIONS AFTER COSMETIC SURGERY: MANAGEMENT OF PERIPHERAL NERVE INJURY

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Introduction

- Demand for cosmetic surgery continues to rise each year in the United States of America
- There is a relative lack of peer-reviewed literature describing the accurate diagnosis and management of iatrogenic nerve injuries following cosmetic procedures

Results

Abdominoplasty



Figure 1A. Excision of an intercostal T10 neuroma through a periumbilical approach



Figure 1B. Iliohypogastric and ilioinguinal neuromas excised and the cut ends of the nerves were implanted into pre-peritoneal abdominal space

Rhytidectomy

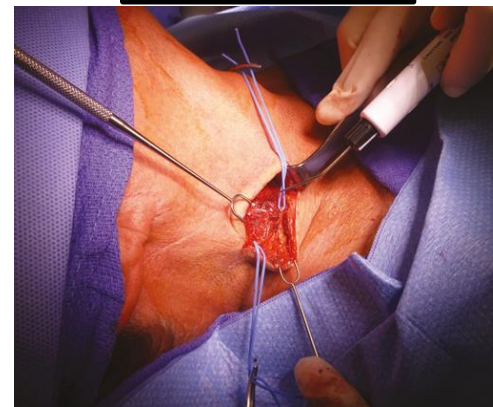
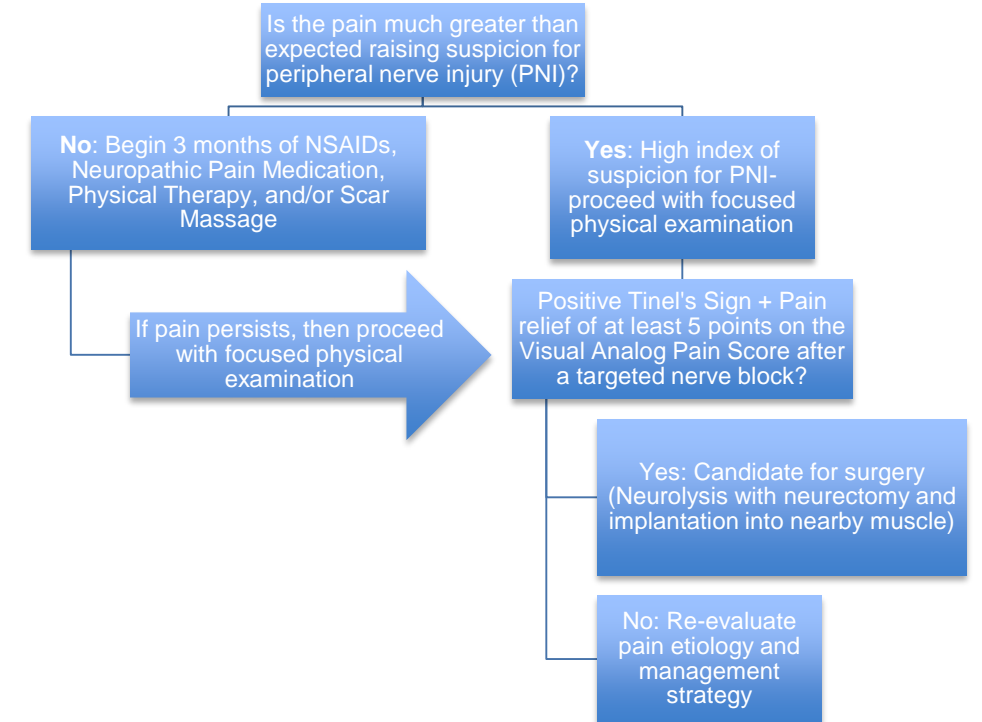


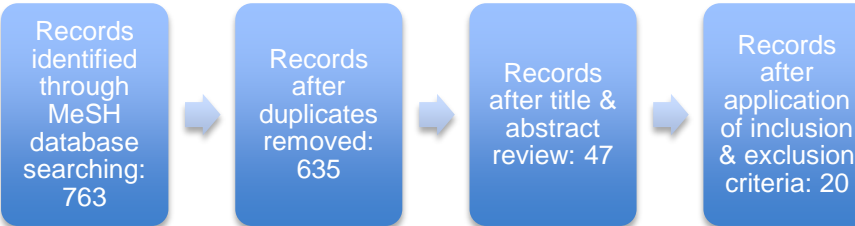
Figure 2. Vessel loops in a case presentation indicating greater auricular nerve (posterior loop) and transverse cervical branch of cervical plexus (anterior loop). Also note posterior border of SCM.

Algorithmic Approach to Suspected Neuroma



Methods

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> • English language • Study type: randomized control trials; cohorts; case series; case reports; cross-sectional studies; meta-analyses; systematic reviews • Procedure was Brow Lift, Brachioplasty, Blepharoplasty, Rhytidectomy, Abdominoplasty, Breast Augmentation, Mastopexy, or Breast Reduction • Procedure was aesthetic • Procedure was surgical • Outcome Measures included pain, nerve injury, neuroma, paresthesia, hyperalgesia, or allodynia • Nerve injury involved sensory nerves 	<ul style="list-style-type: none"> • Non-English language • Study Type: editorials; letters; commentaries • Procedure was not Brow Lift, Brachioplasty, Blepharoplasty, Rhytidectomy, Abdominoplasty, Breast Augmentation, Mastopexy, or Breast Reduction • Procedure was not aesthetic • Procedure was not surgical • Outcome Measures did not include pain, nerve injury, neuroma, paresthesia, hyperalgesia, or allodynia • Nerve injury involved motor nerves • No mention of rate of nerve injury • No mention of rate of nerve pain



Conclusions

- Pain is a potential complication of cosmetic surgery that can negatively affect quality of life outcomes even in light of acceptable aesthetic outcomes
- When pain consistent with a neuroma does occur, it can be managed by the algorithm and techniques presented
- If nerve injury is observed acutely, then repair primarily, if feasible, or implant nerve is advised

References

1. Chatel, H., Madar, Y., Leyder, P., Bonneau, C., Barrat, C., & Quilichini, J. (2016). Prevalence and factors associated with persistent pain following body contouring surgery. *Journal of Plastic, Reconstructive & Aesthetic Surgery : JPRAS*, 69(5), 700-705.
2. Floros, C., & Davis, P. K. (1991). Complications and long-term results following abdominoplasty: A retrospective study. *British Journal of Plastic Surgery*, 44(3), 190-194.
3. Liszka, T. G., Dellon, A. L., & Manson, P. N. (1994). Iliohypogastric nerve entrapment following abdominoplasty. *Plastic and Reconstructive Surgery*, 93(1), 181-184.
4. Ducic, I., Zakaria, H. M., Felder, J. M., 3rd, & Arnsperger, S. (2014). Abdominoplasty-related nerve injuries: Systematic review and treatment options. *Aesthetic Surgery Journal*, 34(2), 284-297.
5. de Chalain T, Nahai F. Amputation neuromas of the great auricular nerve after rhytidectomy. *Ann Plast Surg*. 1995;35(3):297-299.
6. Eisenberg E, Yaari A, Har-Shai Y. Chronic, burning facial pain following cosmetic facial surgery. *Ann Plast Surg*. 1996;36(1):76-79.