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## The Evolution of Neck Dissection

The negative impact of cervical lymph node metastases on prognosis for all malignancies in the Head and Neck has been appreciated for well over on and half century. Early attempts at removal of lymph nodes were not successful. Contributions of Henry Butlin and George Crile defined the need for, and the technique of neck dissection. In the first half of the past century, Hayes Martin popularized the technique and efficacy of radical neck dissection (RND) in controlling neck metastases. Combining RND with radiation achieved further improvement in regional control. However, the significantly functional and esthetic morbidity of RND remained a concern.

It was not until the studies of patterns of neck metastases published in late 1980s, that we came to understand that nodal metastases occurred in a predictable sequential fashion, and a select group of nodes were at risk of initial involvement. This knowledge introduced the concept of modified and selective neck dissections, with reduced morbidity and equal efficacy to RND. Availability of CT scans and MRI, further assisted in identifying clinically non palpable but radiologically suspicious small lymph nodes, facilitating the extent of neck dissection. Introduction of sentinel node mapping from accessible mucosal cancers of the upper aerodigestive tract, further reduced the morbidity from elective neck dissection, with a high degree of accuracy to identify clinically occult first echelon lymph nodes.

Improved surgical techniques, with appropriate selection of neck incisions, removal of only the lymph node groups at risk, and the use of electro cautery has made neck dissection, safe, oncologically effective as well as functionally and esthetically acceptable today. Addition of post operative RT or Chemo RT, when indicated has significantly improved regional control of disease in modern day practice.

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## 颈清扫术的演变

人们认识到颈淋巴结转移对头颈部所有恶性肿瘤预后的负面影响已有半个多世纪。早期的淋巴结清扫尝试并不成功。亨利-布特林（Henry Butlin）和乔治-克里尔（George Crile）的贡献确定了颈部清扫的必要性和技术。上世纪上半叶，海斯-马丁（Hayes Martin）推广了根治性颈部清扫术（RND）的技术和疗效，以控制颈部转移。将 RND 与放射相结合，进一步提高了区域控制效果。然而，RND 在功能和美观方面的明显发病率仍然令人担忧。

直到 20 世纪 80 年代末发表的关于颈部转移模式的研究报告，我们才逐渐了解到淋巴结转移是以可预测的顺序方式发生的，而且一组特定的淋巴结有可能首先受累。这一知识引入了改良和选择性颈部切除术的概念，降低了发病率，疗效与 RND 相当。CT 扫描和 MRI 的出现进一步帮助确定了临床上无法触及但放射学上可疑的小淋巴结，从而有助于确定颈部清扫的范围。

从上消化道黏膜癌中引入前哨淋巴结的概念，进一步降低了选择性颈部清扫术的发病率，并能高度准确地识别临床上隐匿的第一梯队淋巴结。

手术技术的改进、颈部切口的适当选择、仅切除有风险的淋巴结群以及电刀的使用，使得颈部清扫术变得安全、有效，同时在功能和美观上也是可以接受的。在有条件的情况下，再加上术后 RT 或化学 RT，在现代实践中已大大改善了疾病的区域控制。