

Neoplastic Cervical Lymph Nodes

Database study

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Introduction

Cervical lymph nodes are frequently involved in a number of disease conditions. The most commonly seen causes of cervical lymphadenopathy are tuberculosis, distant metastasis and lymphoma. Fine needle aspiration cytology is used for evaluating enlarged cervical lymph nodes and has a high degree of sensitivity and specificity¹.

When a patient presents with an isolated neck mass, a thorough clinical history and examination is essential, including a full ear, nose and throat assessment with nasendoscopic examination of nose and upper aerodigestive tract. In case of unknown primary fine needle aspiration cytology should be then performed and will often afford a clear indication of the pathological nature of the lesion. In cases of uncertainty, open biopsy is necessary².

The nomenclature of head and neck lymph nodes has been affiliated to various confusing synonyms that are still in use in the major textbooks and articles. Several expert bodies have proposed the adoption of systematic classification aimed at standardization of the terminology. The committee of Head and Neck Surgery and Oncology of the American academy of Otolaryngology-Head and neck surgery issued a classification, dividing the neck into six levels some of which may have biological significance independent of the larger zone in which they lie. Some of these are outlined in sublevels; IA (submental nodes), IB (submandibular nodes), IIA and IIB (together comprising the upper jugular nodes), and VA (spinal accessory nodes) and VB (transverse cervical and supraclavicular nodes)³.

The presentation of metastatic carcinoma involving neck nodes without clinical evidence of a primary tumour is an unusual, but not a rare situation. It accounts for only 2-3 % of patients with head and neck malignancy.⁴. In case of unknown primary metastases most commonly develop at nodal levels II and III and less frequent involvement of levels I, IV and VI.⁵

Neck dissection of cervical lymphadenopathy refers to the systematic removal of lymph nodes with their fibrofatty tissue from the various compartments of the neck. The evolution of cervical lymphadenectomy procedures during the 20th century has provided the modern head and neck surgeon with a repertoire of surgical techniques for removing nodal metastases⁶.

A database is an organized collection of data for one or more purposes, usually in digital form. The term database is correctly applied to the data and data structures themselves. Database also refers to the logical and physical materialization of its data content, in files, computer memory, and computer data storage. Database is different from the Data Base Management System which is a software system that allows storing and changing the data⁷.

The database concept has evolved since the 1960s to ease increasing difficulties in designing, building, and maintaining complex information systems. It has evolved together with the evolution of Database management systems (DBMSs) which enable the effective handling of databases[^].

To the best of our knowledge, no cervical lymphadenopathy database studies have been registered in Egypt. The data analysis will be performed utilizing Microsoft Office Excel 2007 as software. The Data extracted from the excel sheet analysis can help calculate a risk-stratification model for further clinical application, epidemiological studies and selection of individually tailored therapy. This will be needed to construct Evidence Based Strategies of treatment.

Aim of the Study:

Collection of data regarding patients presented with enlarged cervical lymph nodes and/or underwent neck dissection in Otolaryngology department, Faculty of medicine, Ain Shams University focusing on the period from July 2010 to July 2011 and data collection will be ongoing till presenting the study.

The collected Database will be used to calculate and analyze the different information regarding neoplastic cervical lymph nodes aiming the following objectives:

- Demographic analysis for patients presented with neoplastic cervical lymph nodes.
- Percentage of patients presented with cervical lymph nodes from all admitted head and neck malignancy in the department.
- Percentage of patients presented with cervical lymph nodes from those with different primary malignant sites admitted in the department.
- Percentage of patients presented with cervical lymph nodes from those with cancer larynx admitted in the department.
- Percentage of patients with positive nodes from those whom underwent neck dissection.

This will be done by the following procedure:

- 1- Determination of the target subject
- 2- Data collection.
- 3- Data analysis.
- 4- Reporting and interpretation.
- 5- Discussion and conclusions.
- 6- References.

1-Target subject: Data will be collected from all inpatients at Otolaryngology department, AinShams University Hospital who present with neoplastic cervical lymph nodes either as a symptom, sign or radiological finding as well as patients who underwent neck dissection.

٢-Data collection: Demographic data in the form of name, age, sex, address, marital status, address and smoking will be collected. Clinical data such as presenting symptoms and signs, enlarged cervical lymph node site, size, number, consistency, mobility and tenderness will be highlighted. Radiological data as well as available fine needle aspiration data will also be collected. Provisional diagnosis, treatment decision, operative data, when present, surgical complications, skipped metastasis and final diagnosis will all be collected. A form of data collection sheet will be used allowing an easy, practical and uniform way of data collection.

٣-Data analysis: Data analysis will be preformed utilizing Microsoft Office Excel ٢٠٠٧ as software, to expose the most common presentations, findings, diagnosis, as well as investigations done. The different lines of treatment as well as the surgical details of the removed nodes will also be analyzed. The role of different investigational procedures will be highlighted.

٤-Reporting and Interpretation: After analysis, interpretation of the gathered data will be done to highlight the value of different investigations used, the role of surgery, the results as well as the complications of treatment lines.

٥-Discussion and conclusion.

٦-References:

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Abbreviations

H and N	Head and neck
SCC	Squamous cell carcinoma
HNSCC	Head and neck Squamous cell carcinoma
NPC	Nasopharyngeal carcinoma
SAN	Spinal accessory nerve
SCM	Sternocleidomastoid muscle
ND	Neck dissection
LN	Lymph node
SND	Selective neck dissection
IJV	Internal jugular vein
DBMS	Database management systems
CRT	Chemotherapy and radiotherapy
FNA or FNAC	Fine needle aspiration and cytology
US-FNAC	Ultra-sound Fine Needle Aspiration and Cytology

Abbreviations

US	Ultra-sound
RT	Radiotherapy
HPV	Human Papilloma Virus
CT	Computed tomography
MRI	magnetic resonance imaging
PET	positron emission tomography
FDG	Fluorodeoxyglucose
SEER	The National Cancer Institute for Surveillance, Epidemiology and End Results Program
MECC	Middle-East Cancer Consortium of the National Cancer Institute
DAHNO	Data for Head and Neck Oncology system
HNC	Head and neck cancer
OHANCAW®	Oral, Head and Neck Cancer Awareness Week
AHNS	The American Head and Neck Society
MRND	Modified radical neck dissection

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Introduction and Aim of the study



Introduction:

Cervical lymph nodes are frequently involved in a number of disease conditions. The most commonly seen causes of cervical lymphadenopathy are infectious, distant metastasis and lymphoma (Khanna et al, ٢٠١١).

When a patient presents with an isolated neck mass, a thorough clinical history and examination is essential, including a full ear, nose and throat assessment with nasendoscopic examination of nose and upper aerodigestive tract.

In case of unknown primary fine needle aspiration cytology (FNAC) should be then performed and will often afford a clear indication of the pathological nature of the lesion. FNAC is used for evaluating enlarged cervical lymph nodes and has a high degree of sensitivity and specificity (Khanna et al, ٢٠١١). In cases of uncertainty, open biopsy is necessary (Ansari et al ٢٠٠٨).

The nomenclature of head and neck lymph nodes has been affiliated to various confusing synonyms that are still in use in the major textbooks and articles. Several expert bodies have proposed the adoption of systematic classification aimed at standardization of the terminology. The committee of Head and Neck Surgery and Oncology of the American academy of Otolaryngology-Head
