

**PATTTERN OF OCCURRENCE OF JAW CYSTS AND CYST-LIKE
LESIONS IN PATIENTS AT THE UNIVERSITY OF NAIROBI DENTAL
HOSPITAL: A 10-YEAR HISTOPATHOLOGIC AUDIT.**

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IN ORAL AND MAXILLOFACIAL SURGERY, UNIVERSITY OF NAIROBI.**

DECLARATION

I hereby declare that this thesis is my original work and has not been submitted in any other University or by any other person (s).

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DEDICATION

This work is dedicated to my dear wife Mary, my sons Lance and Mervyn for the support they have given me and my parents for their guidance and prayers.

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ABBREVIATIONS

ABC	- Aneurysmal bone cyst
BCC	- Basal cell carcinoma
BOC	- Botroid odontogenic tumour
cDNA	- complimentary deoxyribonucleic acid
CCOT	- calcifying cystic odontogenic tumour
COC	- Calcifying odontogenic tumour
DC	- Dentigerous cyst
DGCT	- Dentinogenic ghost cell tumour
GMC	- Globulomaxillary cyst
HS	- Heparin sulphate
IL	- Interleukin
KCOT	- Keratocystic odontogenic tumour.
mRNA	- Messenger Ribonucleic Acid
MMP	-Matrix Metalloproteinase
NBCCS	- Naevoid Basal Cell Carcinoma Syndrome.
NPDC	- Nasopalatine duct cyst
OC	- Odontogenic cysts
OPG	- Osteoprogenin
PGE	- Prostaglandin
<i>PTCH</i> gene	- <i>Patched</i> gene.
PG	- Periapical granuloma
RANKL	- Receptor activator of nuclear $k\beta$ ligand
SHH	- Sonic Hedgehog Gene
SMO	- Smoothened protein
RC	- Radicular cyst
RRC	- Residual radicular cyst
TBC	- Traumatic bone cyst
TGF	-Transforming Growth Factor
UNDH	- University of Nairobi dental hospital
VEGF	-Vascular endothelial growth factor

DEFINATION OF TERMS

Audit- To enumerate and list the identified items

Cyst- Pathological cavity in a tissue with or without epithelial lining

Cyst-like lesion- Pathological cavity with epithelial lining that has aggressive behaviour and neoplastic ability

Neoplasm- Activity of cells to undergo uncontrolled growth and metastatize to other region

Verification – To confirm the previous diagnosis

ABSTRACT

BACKGROUND: Jaw cysts and cyst-like lesions cause facial deformity, destruction of dental tissues and affect masticatory and phonation functions. These adversely erode patients' psychosocial status; create low self-esteem and may change one's facial identity and appearance. There is hardly any available biodata on the pattern of occurrence, demographic pattern and histopathological variants of the various jaw cyst and cyst-like lesions at the University of Nairobi Dental Hospital (UNDH).

OBJECTIVES: To determine the histo-pathologic characteristics, variants and demographic pattern of jaw cysts and cyst-like lesions at the UNDH.

MATERIAL AND METHODS: This was an analytical and verification study that involved microscopic re-examination of all available incisional/excisional biopsy samples from January 2000 to December 2009 for histo-pathological diagnosis.

RESULTS: 187 jaw cysts and cyst-like lesions were diagnosed at the UNDH over the ten-year period. Keratocystic odontogenic tumours constituted 28%, dentigerous cysts 25%, nasopalatine duct cysts 19%, radicular cysts 15%, while calcifying odontogenic cysts comprised 4% of all the lesions. The rest of the lesions ranged between 1% and 3% of all the lesion entities

CONCLUSION: Keratocystic odontogenic tumours and dentigerous cysts were the most common developmental cyst-like lesion and odontogenic cysts diagnosed in the ten-year period respectively. The radicular cyst was not the most common odontogenic cyst unlike what other studies have reported.

RECOMMENDATION: All tissues associated with extracted teeth which have periapical pathology should be sampled for histopathology analysis.