

Histopathological Spectrum Of Head And Neck Lesions At Tertiary Care Hospital: 1531 Cases Study

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Abstract: Background: Head and neck lesions are commonly encountered in patients across all age groups. This region encompass a multitude of congenital, inflammatory or neoplastic lesions. To study different Head and neck lesions, find out frequency of benign and malignant head and neck lesions, histopathological appearance, compare and correlate the various histopathological Head and Neck lesions in relations to age, gender, and site of distribution at P. D. U. Medical College & Hospital, Rajkot, Gujarat, India. Material And Methods: Received specimens were fixed in 10% formalin overnight, processed, blocks were made and sectioning was done and stained with Harris Haematoxylin and Eosin stain in histopathology laboratory. Result: Total 1531 cases were studied during the period of 1st August 2019 to 31st July 2021. Out of 1531 cases 991 were males and 550 females respectively. The most affected age group was 41-60 years. Most common anatomical site affected was Nose and Paranasal sinuses. This study include Infectious diseases as a leading cause of Head and Neck lesions because it includes period of Covid Pandemic with most common infection was Mucormycosis. Conclusion: We concluded that site specific data is helpful in evaluating common and rare lesions of head and neck and it also give idea about which site affects more frequently. We also concluded that period during which study is conducted is having huge impact on result. [Bhalodiya N Natl J Integr Res Med, 2022; 13(3): 15-18, Published on Dated: 10/05/2022]

Key Words: Head And Neck Lesions, Nose And Paranasal Sinuses, Mucormycosis

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Introduction: Head and neck lesions are commonly encountered in patients across all age groups¹. This region encompasses a multitude of congenital, inflammatory or neoplastic lesions. The different sites include scalp, forehead, oral cavity, upper airways, including the nose, larynx, and nasal sinuses and pharynx, ears, eye, skin, soft tissue, lymph nodes, salivary glands, thyroid and parathyroid. Common benign and inflammatory lesions of head and neck region include various cysts and swellings of skin and subcutaneous tissues, Koch's and other inflammations, goiter, salivary gland swellings, lymphadenitis and oral lesions^{2,3}. Cancer of the head, face and neck is more common in Asians and is one of the commonest malignancies in India, accounting for 23% of all cancers in males and 6% in females. The present study is aimed to review the histological patterns of biopsied head and neck lesions.

Material & Methods: The present study was undertaken in the department of Pathology, P.D.U. Medical College, Rajkot during the period of 2 years, from August 2019 to July 2021. Histopathological study was carried out on biopsy and surgical specimens received from surgical

department of P.D.U. Medical College, Rajkot. Specimens were sent in 10% formalin, ten to fifteen times that of the specimen's volume. It was kept for 24 hours in 10% formalin for proper fixation.

After fixation specimen were grossed and 3-5 mm sized sections were cut and put it in cassettes which were kept in Processing. A prospective study of Head and Neck lesions on histopathology was carried out in P.D.U. Medical College & Hospital, Rajkot between 1st August 2019 to 31st July 2021. In this 2 year time span total 1541 case were registered.

Results: Results are as follows.

1. Age And Sex Wise Distribution Of Cases: Total 1541 registered cases were divided in 20 years age group for male and females simultaneously for all two years; survey showed 852 female cases and 989 male cases.

The affected age group was different according to anatomical site involved. The most common anatomical site involved was Nose and Paranasal sinuses followed by Lip and Oral cavity.

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Table 1: Age And Sex Wise Distribution Of Head And Neck Lesion (1st August 2019 To 31st July 2021)

Age Group	Male	Female	Total
0-20	58	69	127
21-40	257	146	403
41-60	510	262	772
61-80	162	66	228
>80	4	7	11
Total	991	550	1541

Table 2: Distribution According To Anatomical Site (1st August 2019 To 31st July 2021)

Nature of Lesion	Cases	Percentage
Benign	297	19.27%
Malignant	341	22.13%
Inflammatory	206	13.37%
Infection	660	42.83%
Others	37	2.40%
Total	1541	100%

Table 3: According To Nature Of Lesion (1st August 2019 To 31st July 2021)

Site	Frequency	Percentage
Skin	168	10.9%
Thyroid	34	2.2%
Salivary Gland	16	1.0%
Lymphoid Tissue	72	4.7%
Lip & Oral Cavity	347	22.5%
Eye	39	2.5%
Nose & Paranasal Sinuses	747	48.4%
Ear	65	4.2%
Bone	33	2.1%
Larynx, Pharynx & Hypopharynx	22	1.4%
Total	1543	100%

Discussion : Head and neck lesions are commonly encountered in patients of all age group including skin, soft tissue, thyroid, lymph node, salivary gland, eye, nose, oral, otologic, etc, include a spectrum of lesions ranging from simple benign to highly malignant, contribute to significant morbidity and mortality.

Most of the lesions can also identify by FNAC, but histopathology is always a gold standard for confirmatory diagnosis⁴.

In P.D.U. Medical College & Hospital, Rajkot the prospective study was carried out for the period of 1st August 2019 to 31st July 2021; in which 1541 cases of Head & Neck lesions were seen of

which 991 cases were male and 550 cases were female respectively which had ratio of 1.80:1.

1541 cases were distributed by age and sex in which age group in year was made of 20 years; in which 41-60 years age group showed highest registered cases both in males and females which came to 772 (50.09%) cancer cases. Agrawal et al. showed highest cases in 11-20 years age group with 89(27.7%) cases of 321 registered in 2017⁷.

This was common for both sexes. Another study done by Tomar et al. during 2018 to 2019 showed the highest cases in 21-30 years age group with 45(24.19%) cases of 186 registered cases⁶.

Rastogi et al. studied highest cases in 21- 40 years of age group that is 56.11% out of 627 cases⁵.

Table 4: Age & Sex Wise Distribution Combined For Both Sex

Study	Year	Most Common Age Group	Cases No (%)
Rastogi et al.	2018	21-40 Years	218 (56.11%)
Tomar et al.	2018-19	21-30 Years	35 (24.19%)
Agrawal et al.	2017	11-20 Years	89 (27.7%)
Present study	1st August 2019 to 31st July 2021	41-60 Years	772 (50.09%)

The cases were classified according to topography (for both sex) in which Nose and Paranasal sinuses were in lead with 267(33.33%) cases.

Tomar et al. studied that skin and soft tissue lesions were in lead with 81(43.50%) cases⁶. Similarly Rastogi et al. also showed that skin and soft tissue lesions were in lead with 187(27.9%)⁵, while Agrawal et al. showed that Neck lesions were in lead with 104 (32.3%)⁷.

The most common head and neck lesions found in both sex in this survey was infective mainly Mucormycosis with 656(42.6%) cases. All other study that are Tomar et al., Agrawal et al. and Rastogi et al. showed benign cases were in lead with 102(54.9%), 197(20.35%), and 202(61.5%) accordingly^{5,6,7} (Table 5).

Table 5: Distribution Of Head And Neck Lesions According To Topography (Combined For Both Sex)

Study	Year	Most Common Topography Area Involved	Cases No (%)
Rastogi et al.	2018	Skin And Soft Tissue	187(27.9%)
Tomar et al.	2018-19	Skin And Soft Tissue	81(43.50%)
Agrawal et al.	2017	Neck	104(32.3%)
Present Study	1st Aug 2019 To 31st July 2021	Nose & Pns	747(48.47%)

Table 6: Comparison According To Most Common Type Of The Lesion

Study	Year	Most Common Type Of Lesion	Cases No (%)
Rastogi et al.	2018	Benign	202(61.25%)
Tomar et al.	2018-19	Benign	102(54.9%)
Agrawal et al.	2017	Benign	197(20.35%)
Present study	1st August 2019 to 31st July 2021	Infective	656(42.6%)

As this study included the period of covid pandemic time, there were increase cases of post covid mucormycosis, and that is why most common type of lesion were infective, which makes it a unique study.

Conclusion: The prospective study of histopathology of Head and Neck lesions was carried out for the period 1st August 2019 to 31st July 2021 in P.D.U. Medical College & Hospital, Rajkot. This study showed: Total of 1541 cases were registered in these 2 years span.

Out of 1541 cases 991 male cases and 550 cancer cases were seen with ratio of 1.80:1 male: female population. 41-60 years age group showed maximum cases of total with 772(48.47%) out of 1541(100%) cases registered.

Cases were studied accordingly to anatomical sites in which showed out of 1541(100%) cases; Infectious cases were in lead with 656(42.6%) cases that mostly includes Mucormycosis followed by Malignant lesions 341(22.1%) and Benign cases 297(19.3%) cases respectively.

Out of 656(100%) total Infectious cases 520(79.3%) cases were of Nose and Paranasal sinuses.

Out of 341(100%) total Malignant cases, lip and oral cavity cancer cases was in lead with 242(70.96%) cases in which Squamous cell carcinoma was in lead with 228(94.21%) cases out of 242(100%).

Out of 297(100%) total Benign cases, skin benign lesions were in lead with 109(36.7%) cases which

includes various skin adnexal tumours, keloid and vascular malformation.

This study included the time period of Covid pandemic that is followed by rise in the cases of Mucormycosis and that is why infectious conditions lead in this study compared to other studies. That is how this study is unique.

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