

# FREQUENCY OF MALIGNANCY IN PATIENTS PRESENTING WITH PAROTID SWELLING

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## ABSTRACT

**Objective:** To determine the frequency of malignancy in patients presented with Parotid swelling.

**Material and Methods:** This study was conducted in Otolaryngology department, Khyber Teaching Hospital, Peshawar, Pakistan from January 2018 to December 2019. One-twenty six Patients of age 18 to 68 years with Parotid swelling were included. Patients with history of Parotid surgery and inflammatory conditions were excluded.

**Results:** Out of 126 patients, males were 76 (60.31%) and females 50 (39.69%). Malignancy in male patients was 20 (15.87%) as compared to females which was 13 (10.32%).

**Conclusion:** Malignancy was found in 10-15% of patients who presented with Parotid swelling which necessitates biopsy in all such patients.

**Keywords:** Parotid gland, malignancy.

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## INTRODUCTION

Parotid swelling may be inflammatory, granulomatous and neoplastic<sup>1</sup>. Most lesions have a long history of painless lump unilateral and rarely bilateral<sup>2</sup>. Sudden onset of the swelling, pain, hard in consistency, facial nerve weakness and regional lymph nodes involvement has clinical suspicion of malignancy. Some tumours presents with regional lymph node involvement while others presents with distant metastasis<sup>3</sup>.

About 75 % benign lesions arise in Parotid glands while malignant about 10 to 15 % thereafter incidence of malignancy increases in submandibular and sublingual glands. In a study the reported malignancy is 14.0% as compare to other studies<sup>4</sup>. In other published studies malignancy is 10.3% and 9% in Parotid lesions<sup>5, 6</sup>. If swelling is solid or cystic on ultrasound then one must perform fine needle biopsy if it is suggestive of malignancy then treatment of choice is total conservative Parotidectomy if

needed with neck dissection for neck nodes and post operative radio therapy<sup>7-11</sup>. Benign lesion on needle biopsy need superficial Parotidectomy with histopathological examination of the specimen as a part of management protocol<sup>11</sup>. Parotid surgery need experience surgeon many vital structures passes through it otherwise the procedure will end with complications<sup>12</sup>.

Parotid region has great cosmetic and surgical importance patient with Parotid swelling must be counselled for surgical resection. Many benign swellings transform in to malignant due to delay in proper treatment. Early surgery greatly reduces morbidity and mortality on patient side.

## MATERIAL AND METHODS

This cross sectional study was conducted in the Department of otorhinolaryngology, Khyber Teaching Hospital, Peshawar-Pakistan from January 2017 to December 2019. Total 126 patients of both gender, age from 18 to 68 years and patient of Parotid lump on clinical examination confirmed by ultrasound were included. History of Parotid surgery, unresectable swelling, uncontrolled diseases like diabetes hypertension, ischemic heart diseases and inflammatory conditions were excluded. Approval from hospital ethical and research committee was taken the purpose and benefits of study were explained to the patients and an informed consent was obtained.

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All patients were subjected to detailed history and examination diagnosis of Parotid swelling was based on the clinical and radiological examinations of Parotid glands. Diagnostic criteria for malignancy were pre operative fine needle aspiration cytology and histopathology of the operated specimen.

All the above mentioned information including name, age, gender and address which recorded in the study proforma. Data collected was analyzed in SPSS version 22.

The result were expressed as frequencies and percentages. Malignancy in Parotid swelling was stratified among both sexes and in all age groups to see the effect modification. Results were presented as tables and graphs.

## RESULTS

The results of the study are given in Table 1 and 2. Table 1 shows that a total of 126 patients were studied, in which the number of male and female patients were 76(60.31%) and 50(39.69%) respectively. Among females there were 13(10.32%) malignant and 37(29.37%) non-malignant patients, whereas 20(15.87%) malignant and 56(44.44%) non-malignant in males. Table 2 shows age-wise distribution of malignant and non-malignant patients. The frequency and percentages as 12(9.52%) malignant & 8(6.35%) non-malignant patients, 25(19.85%) malignant & 35(27.78%) non-malignant patients, 12(9.52%) malignant & 14(11.11%) non-malignant patients, and 12(9.52%) malignant & 8(6.35%) non-malignant patients were considered respectively for age groups less than 30, 34 – 48, 49 – 63, and 64 years and above.

**Table 1: The distribution of gender with respect to malignant and non-malignant patients.**

Gender	Malignant	Percentage of Malignant	Non-Malignant	Percentage of Non-Malignant	Total	Percentage
Male	20	15.87%	56	44.44%	76	60.31%
Female	13	10.32%	37	29.37%	50	39.69%
Total	33	26.19%	93	73.81%	126	100%

**Table 2: Age-wise Distribution of Malignant and Non Malignant patients.**

Age	Malignant	Percentage of Malignant	Non-Malignant	Percentage of Non-Malignant	Total	Percentage
Less than 30	12	9.52	8	6.35	20	15.87%
34 - 48	25	19.85	35	27.78	60	47.63%
49 - 63	12	9.52	14	11.11	26	20.63%
64 & Above	12	9.52	8	6.35	20	15.87%
Total	61	48.41	65	51.59	126	100%

## DISCUSSION

Malignancy of Parotid gland is usually slow growing and may take long time to develop signs and symptoms<sup>13</sup>. Exact etiology is still unknown but its risk increases in extreme of ages<sup>14</sup>. History of pain other body swelling, hard on consistency and nerve weakness arises the suspicion of malignancy as in the literature<sup>15</sup>. Most swellings are unilateral but bilateral can also accure<sup>16</sup>. Ultrasound can demonstrate clearly weather smelling is cystic or solid further confirmation is done on needle biopsy<sup>17</sup>. Some times in selected cases we need incisional biopsy<sup>18</sup>. In lymphomas of Parotid excision of the node is required<sup>19</sup>.

Frequency of malignancy 26.19% is high in this study as compared to other studies that are 20.9% and 10.3% reason is that most of the suspected cases are referred here because surgical clearance needs experienced

surgeon and tertiary care setting<sup>20, 21</sup>. Most lesions require extensive resections which carry risk of complications that are better managed in referral hospitals<sup>22</sup>. We performed minimum superficial Parotidectomy if pre operative biopsy shows cancer cells then total conservative surgery offered<sup>23</sup>. Post op radiation is standard for malignant gland that was offered as in original research<sup>24</sup>. In palpable neck nodes we performed neck dissection to stage the disease pathologically<sup>25</sup>. In this study male patients were 60.31% and female 39.69% as compared to a similar published work<sup>26</sup>. Malignancy was 10.32% in female patients while 15.87% in male as also shown in the results 50.77% male and 49.23% female<sup>27</sup>. Malignancy remains common in children, age must be consider a risk factor 9.52% as in was done is this study<sup>28</sup>. Middle age that is from 34 to 48 years malignancy was 19.85% and non malignant 27.78% supported by article<sup>29</sup>. Again in fifth decade neoplasia

9.52% that is lower in number and age above sixth decade must be considered a great risk for cancer as in the study is 9.52% as compared to non malignant 6.35% also shown in some published studies<sup>30</sup>.

## CONCLUSION

Surgery remains gold standard for Parotid swelling it is both diagnostic and curative and early intervention will help to reduce morbidity and mortality and improve quality of life.

## RECOMMENDATIONS

It is must to initiate an awareness programmes for early referral of such patient with Parotid swelling for proper investigation and prompt treatment as possible early as delayed presentation not only end with complication but also put burden on hospital economy. Tertiary care hospital must provide space for such patients to be operated on priority basis.

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#### AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

**Din I:** Main Idea data collection Manuscript writing.

**Hafeez M:** Statistical Analysis.

**Khan AR:** Overall supervision and approval of final version.

**Khan I:** Bibliography.

**Junaid M:** References.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.