Exploring Delayed Presentation of Large Goiters: A Cross-Sectional Study at a Tertiary Care Hospital in Pakistan

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ABSTRACT

Aim This study aimed to discern the factors contributing to the delayed presentation of goiters.

Study Design: Descriptive Cross-Sectional Study

Location and Duration: Conducted at the Department of General Surgery, Ward 25, from January 2019 to August 31st, 2020

Methodology: Patients attending the thyroid Outpatient Department (OPD) with a history of thyroid goitre persisting for at least 3 years were enrolled. Data were meticulously recorded using a standardized form.

Results: Among 120 participants, 82.5% were male, and the remainder were female. The primary reason for delayed presentation was fear of surgery (31%), followed by advice from traditional healers (20%) and suggestions from peers (12.8%). A statistically significant correlation was observed between educational and socioeconomic status and the timing of intervention presentation (p-value <0.001).

Conclusion: The lack of knowledge about surgical interventions for thyroid diseases emerged as the leading cause of delayed presentation, followed by reliance on advice from traditional healers, peers, and healthcare providers.
Keywords: Enlarged goitre, delayed intervention, educational attainment.

KeyWords: -Goiter, thyroid malignancy, hyperthyroidism, multinodular goiter

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INTRODUCTION

Goitre or a benign enlargement of a thyroid gland that can be asymptomatic in some patients but can cause compressive symptoms like dysphagia and dyspnoea in others1. The incidence of goitre depends upon the iodine intake of the patient, familial background, iodine deficiency, goiterogens and radiation exposure[2]. In long standing cases, nodularity develops frequently. It has been noted in the past that multinodular goitre remains asymptomatic for a longer period of time unless there is underlying malignancy3. Therefore, some people from developing countries usually ignore the enlarging thyroid gland and prefer no treatment until it becomes enlarged and cause symptoms[4]. In contrary to this, in the western world the incidence of thyroid carcinoma has rapidly increased in the recent time due to early presentation and better diagnostic modalities and early intervention, in case of benign smaller toxic thyroid swellings are usually dealt with radio iodine or thyroxin or a combination of both but multinodular large goitre usually does not respond to medical management and requires surgical intervention[5, 6]. Further medical management include mainly iodine replacement, thyroid hormone replacement, thyroid hormone suppressive therapy, and radioactive iodine, whereas refractory to medical therapy in case of large goitre, surgical options are available. Even in experienced hands difficulties are usually encountered during thyroidectomy for the huge multinodular goitre and chances of injury to the vital structures can be expected including tracheal, oesophageal and recurrent laryngeal nerve and hematoma formation[7]. Furthermore, in the post-operative period, these patients can experience traheomalacia and hypocalcaemia due to inability to preserve parathyroid glands[8].To prevent these complications, early surgical intervention is adviced.It has been observed in many high volume thyroid centres that people are presenting with huge thyroid glands with long standing histories despite being symptomatic[9].

Therefore, this study is conducted to find out the reason behind delayed presentation so that the awareness can be provided to the general population to consult with physicians for the evaluation of enlarging thyroid gland as soon as they observe it.

METHODOLOGY:

This descriptive cross sectional study was conducted in surgical ward 25, Jinnah Postgraduate Medical Centre, Karachi, Pakistan, from 1st January 2019 to 31st December 2020. Patients with large goitre at presentation having a history of at least 3years are included in the study. Patients with early presentation (less than 3 years), known thyroid malignancy, solitary thyroid nodule, are excluded from the study. Data was collected in a pre-designed proforma after taking written and informed consent. Data was analysed via SPSS 23 and P value of less than 0.01 was considered significant.

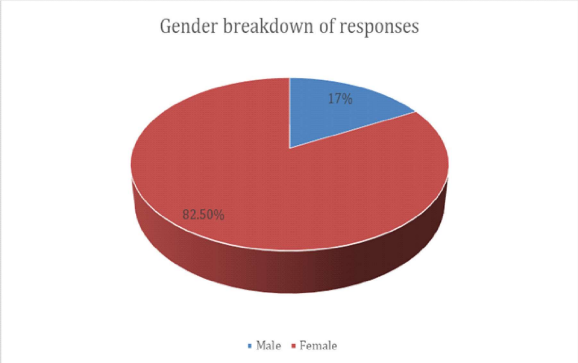
RESULTS:

Total of 120 patients were included in the study as per the inclusion criteria, out of which 99(82.5%) were female and 21(17%) were male.

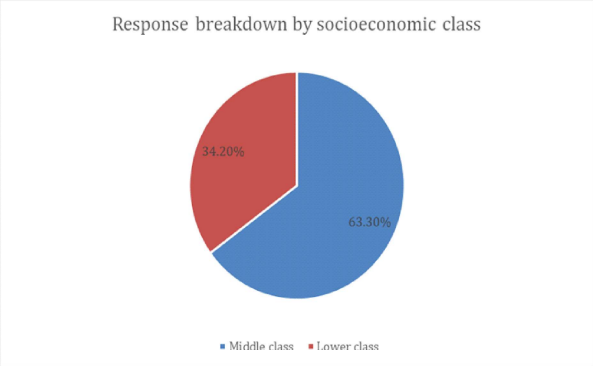
Patient's socio-economic status was determined on the basis of monthly income and expenditure. Most of the patients belong to the middle class (63.3%) followed by lower class (34.2%)

Furthermore, majority of the patients were uneducated (53.3%), with only 31.7% of people who studied in school.

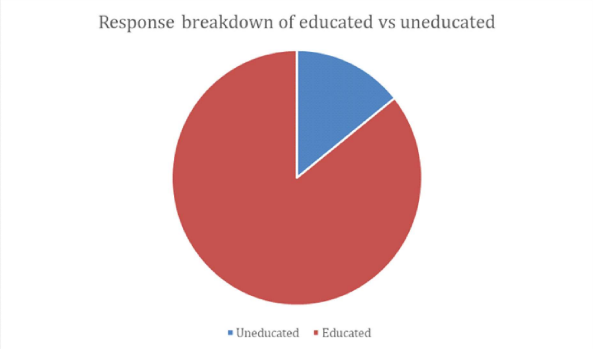
The average time of presentation was found to be 7-8years. Patients are divided in to four age groups i.e. <20years, 20-40years, 41-60years and >60 years. Around 48.3% patient belong to 20-40years group followed by 44.2% in age group of



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41-60years. The reasons for delayed presentation included fear from surgery (31.7%), advise from hakeem/faith healer (20%), advise from physician(10.8%) and advise from relative/ friends(12.5%). In addition to these, around 20% of patient did not give any reason for their late presentation. Significant correlation between the socioeconomic and educational level and delayed presentation has been found with the p-value of less than 0.001. Simply stated, patients belonging to the lower socioeconomic status and who were uneducated were more likely to have delayed presentation. This could be due to a lack of awareness amongst the population regarding the surgical treatment of an enlarged thyroid gland.

DISCUSSION:

Massively enlarged thyroid glands are becoming infrequent in the western world, however, it is still prevalent in some geographical locations. It can cause compressive symptoms including dysphagia, dyspnoea and hoarseness of voice10. Also, the proposed treatment option is surgical and it requires high level of surgical expertise in order to prevent disastrous complications including permanent hypocalcaemia and tracheostomy in case of bilateral RLN injury.

A study conducted in Baghdad showed the incidence of differentiated thyroid carcinoma to be 21.7% in patients with long standing MNGs11. This study finding was also close to the findings presented in the study conducted in Saudi Arabia by Al-Salamah et al. showing 21.3% incidence of differentiated thyroid cancer in MNG detected by FNA and confirmed by subsequent histopathology[12]. One study suggested that , patient with papillary cancer have better survival upto 75% and the incidence of complications were found to be on lower site , this study took a brief review of 200 cases over the period of 30 years and show despite delayed presentation adverse symptoms appear late for which patient seek medical attention.[13] another cross sectional study conducted in India to compare individuals that are iodine deficient or ones having normal iodine intake and it was found that a significant proportion of population with insufficient iodine intake had thyroid related disorders and total prevalence of goitre was 12.2%. [14]

Another study conducted in US based on surveillance among 318,318 participant undergoing various surgeries, the incidence of refusal was found to be 3.5% and mainly among blacks, advance age, unmarried and uninsured individuals. However, racial and ethnic injustice in healthcare domain is one the major talked issue in United states up till date but in our setup still opting for live saving procedures prior to marriages is major dilemma15 Furthermore, the transformation of papillary thyroid carcinoma in to anaplastic thyroid carcinoma is well documented in the literature. Although, it only comprises 3.8% of the thyroid carcinomas, it is the most aggressive form and have a very high mortality rate. Keeping in mind the high incidence of malignancy in MNG and anaplastic transformation, early evaluation of thyroid nodules is indicated16 still the incidence of conversion of papillary to anaplastic carcinoma with life threatening complications are minimal as it requires series of further genetic muta-

tions17, that seems one of the another possibility of delayed presentation, as individuals are unaware of complications that results in early search for medical guidance. Unfortunately, in some eastern part of the world, people are found to be hesitated to seek medical attention for a longer time for thyroid diseases.

This study conducted in one of the surgical unit of Jinnah post graduate medical centre has identified few reasons for the late presentation of large multinodular goitres. Amongst these, fear from the surgery is the most common reason by the patients followed by advise given by faith healers, friends/family and even by some physicians. On top of it, an important co-relation was found between the late presentation and socio-economic status and educational level. The majority of the studied population belonged to the low socioeconomic status and had a very low level of education, therefore, most people were not even aware about the consequences associated with surgery of large thyroid gland and high incidence of carcinoma in MNG.

CONCLUSION:

Lack of education regarding the surgical management of thyroid diseases was found to be the most mentioned cause of delayed presentation followed by advice from hakeem/faith healers, peers and physicians. This is mandating the organization of awareness programs amongst the general population and different health care professionals to highlight the importance of early evaluation of thyroid diseases which in turn will potentially lead to a decrease the morbidity associated with the total thyroidectomy for huge multinodular goitre, especially those with the retrosternal extension.

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