



Retrosternal Goitre: Criteria for Surgical Approach Selection

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ABSTRACT

Objectives:

- Propose clear guidelines to help preoperative planning for surgical approach.
- Determine factors that affect surgical approach selection

Methods:

Data were collected retrospectively on all thyroidectomies carried out by a single surgeon for retrosternal goitres over 9 years in the period between 1998 to 2007 (52 cases).

Results:

According to the findings of computed tomography of neck and chest; 62% of cases were classified as level I (from thoracic inlet to top of aortic arch) and 38% were level II (from aortic arch to the pericardium). In 71% of cases the goitre is situated anteriorly in the mediastinum while posteriorly located goitres were found in 29% of cases. The goitre was on the left side 57% , on right side in 31% and in both sides in 12% of cases. Most of the right sided cases the mass is located posteriorly. The goitre was benign 94% and malignant in 6% of cases. Cervical approach was used in 94% of cases and in 6% of cases intrathoracic approach was mandatory. Intrathoracic approach was used for malignant cases.

Conclusions:

Cervical approach is optimum for benign retrosternal goiters reaching level I and level II whether situated anteriorly or posteriorly in the mediastinum. Malignant retrosternal goiters are better approached through intrathoracic approaches.

INTRODUCTION

Goitre is defined as enlargement of the thyroid gland to twice normal size.¹ If the greater part¹ (over 50 percent) of a goitre's mass occupies the area below the sternal notch, it is termed retrosternal.² Retrosternal goitre is classified as either primary (i.e. truly intrathoracic), arising from aberrant thyroid tissue within the mediastinum, or secondary (i.e. acquired retrosternal), which represents downward growth from a normally located thyroid gland.³ The vast majority of RSGs are benign, with malignancy affecting only a small proportion, ranging from 3–20 per cent,^{4,5} depending on the series. Most intrathoracic goiters can be removed safely through a cervical approach. There are no clear guidelines for preoperatively identifying those patients that may require an intra-thoracic approach.

Despite the widespread use of CT in the preoperative assessment of retrosternal goiter, the correlation between CT features and the surgical approach required has not been investigated previously.

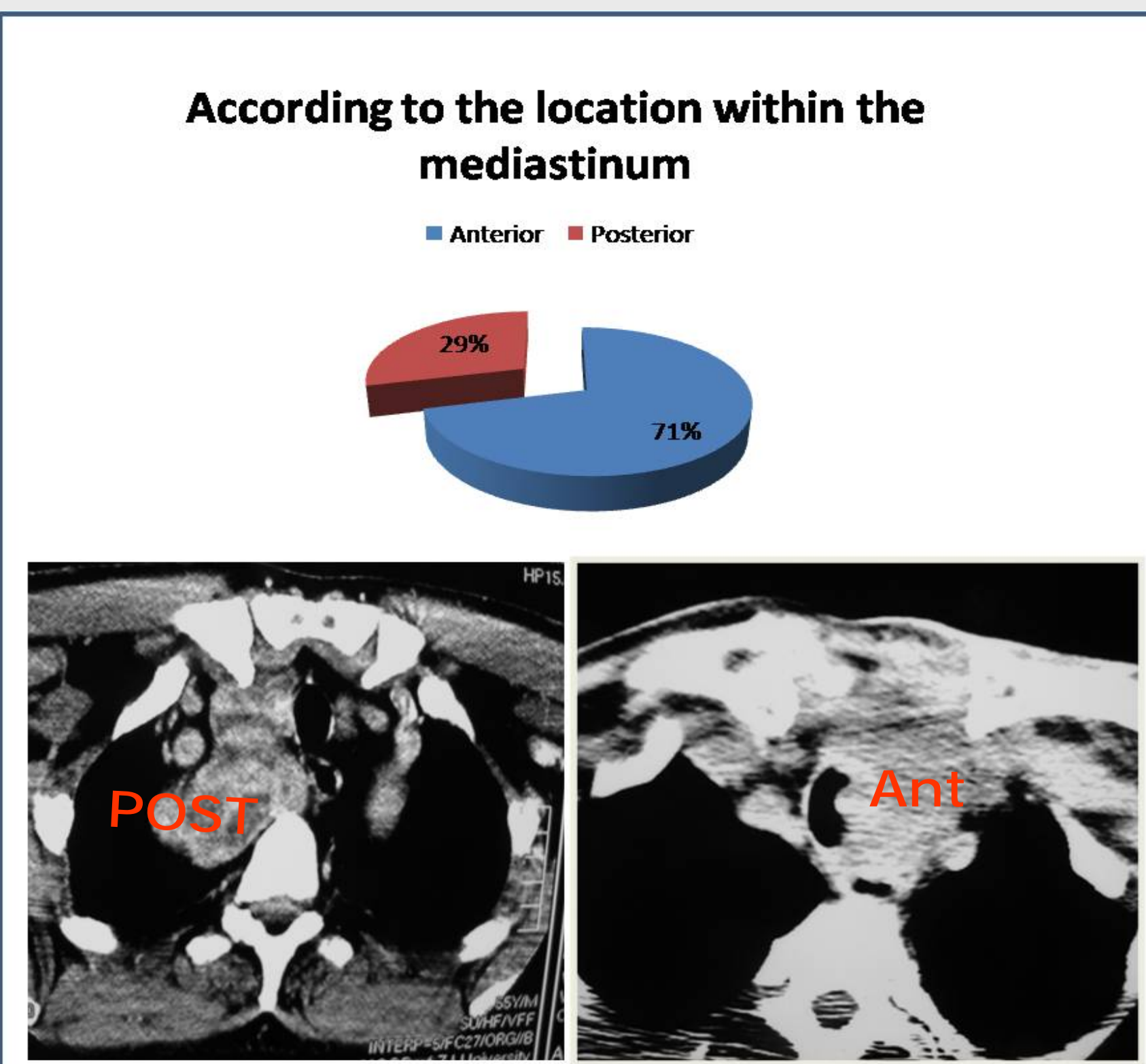
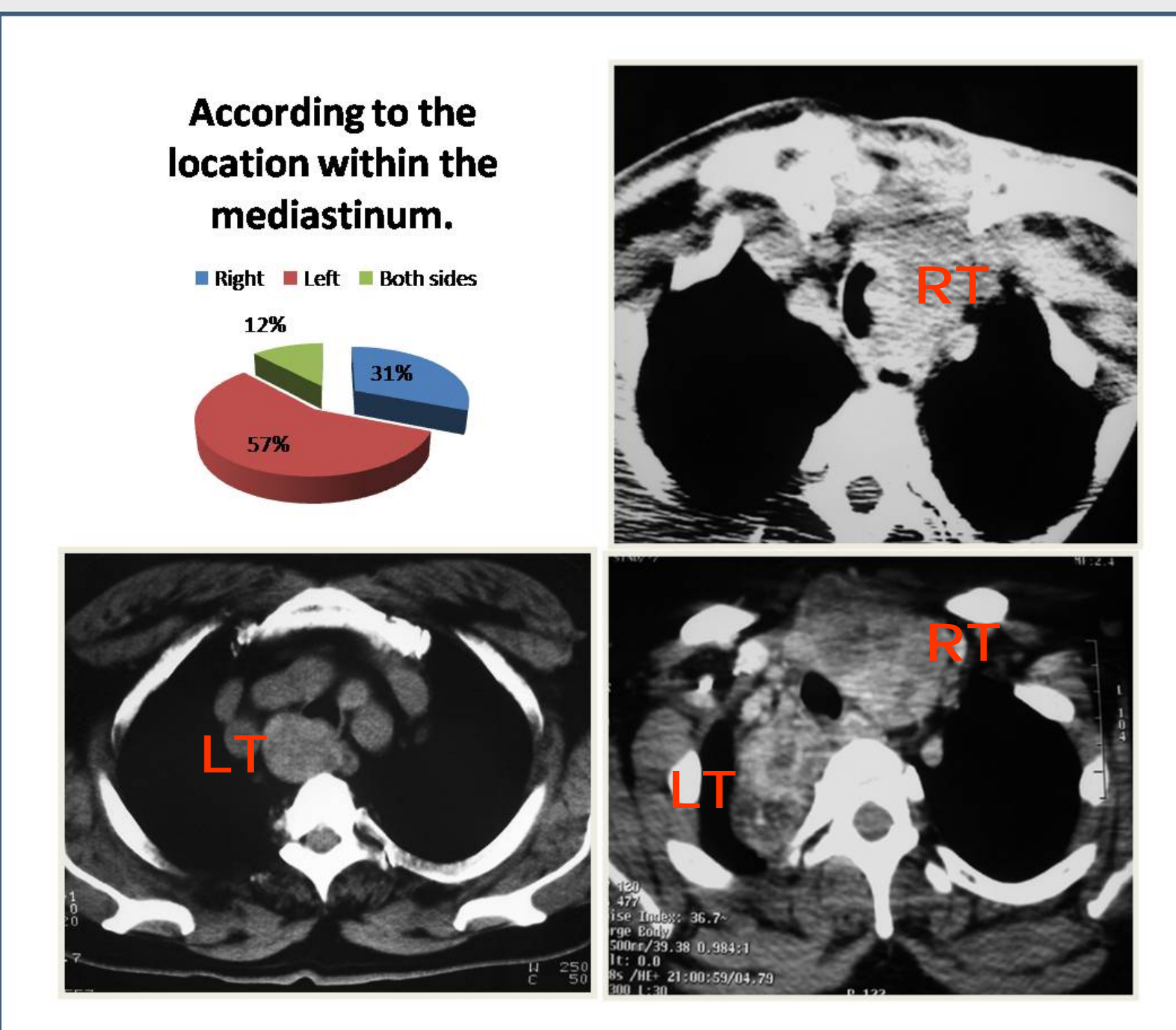
METHODS AND MATERIALS

Data were collected retrospectively on all thyroidectomies carried out by a single surgeon for retrosternal goitres over 9 years in the period between 1998 to 2007 (52 cases).

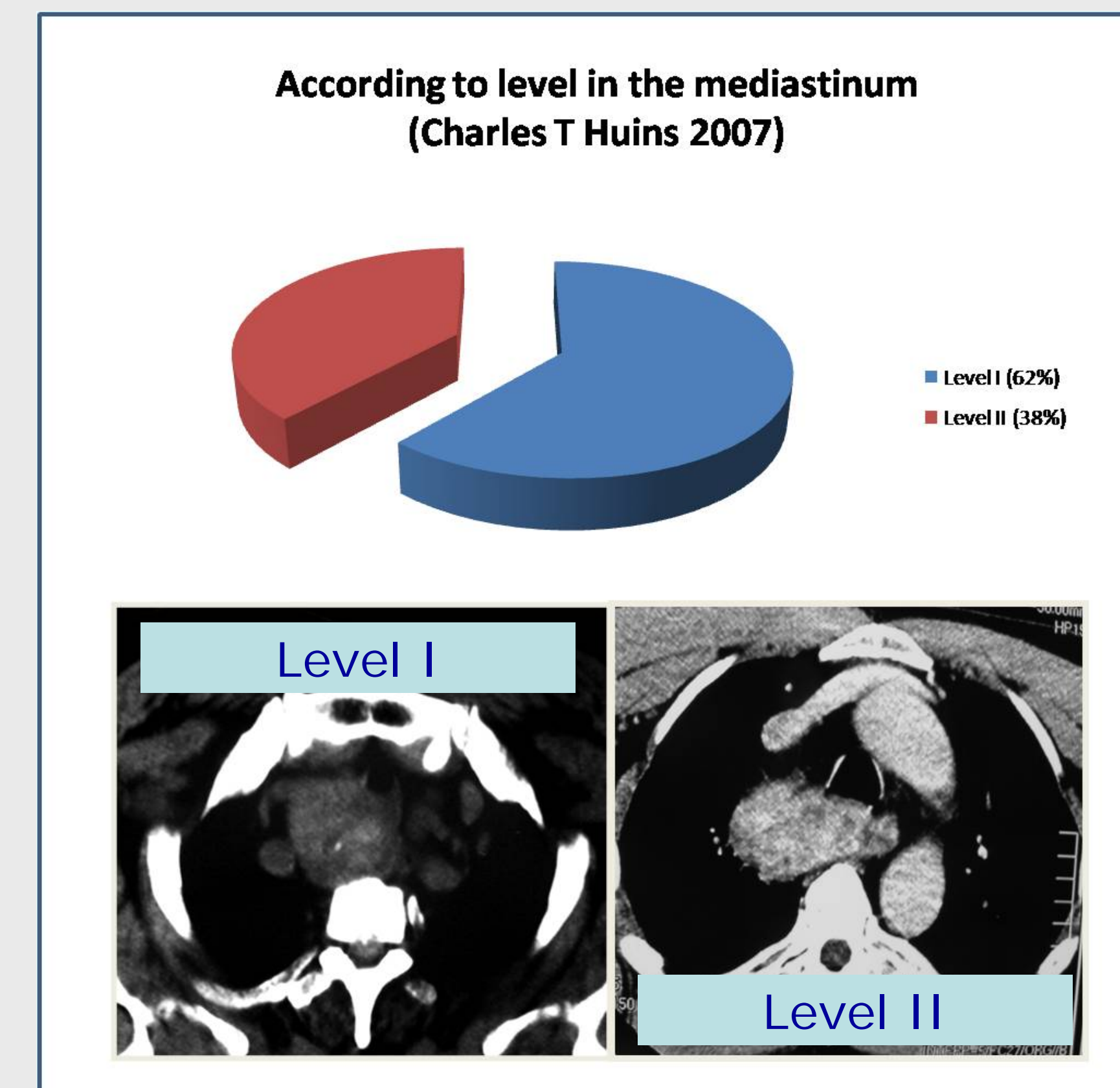
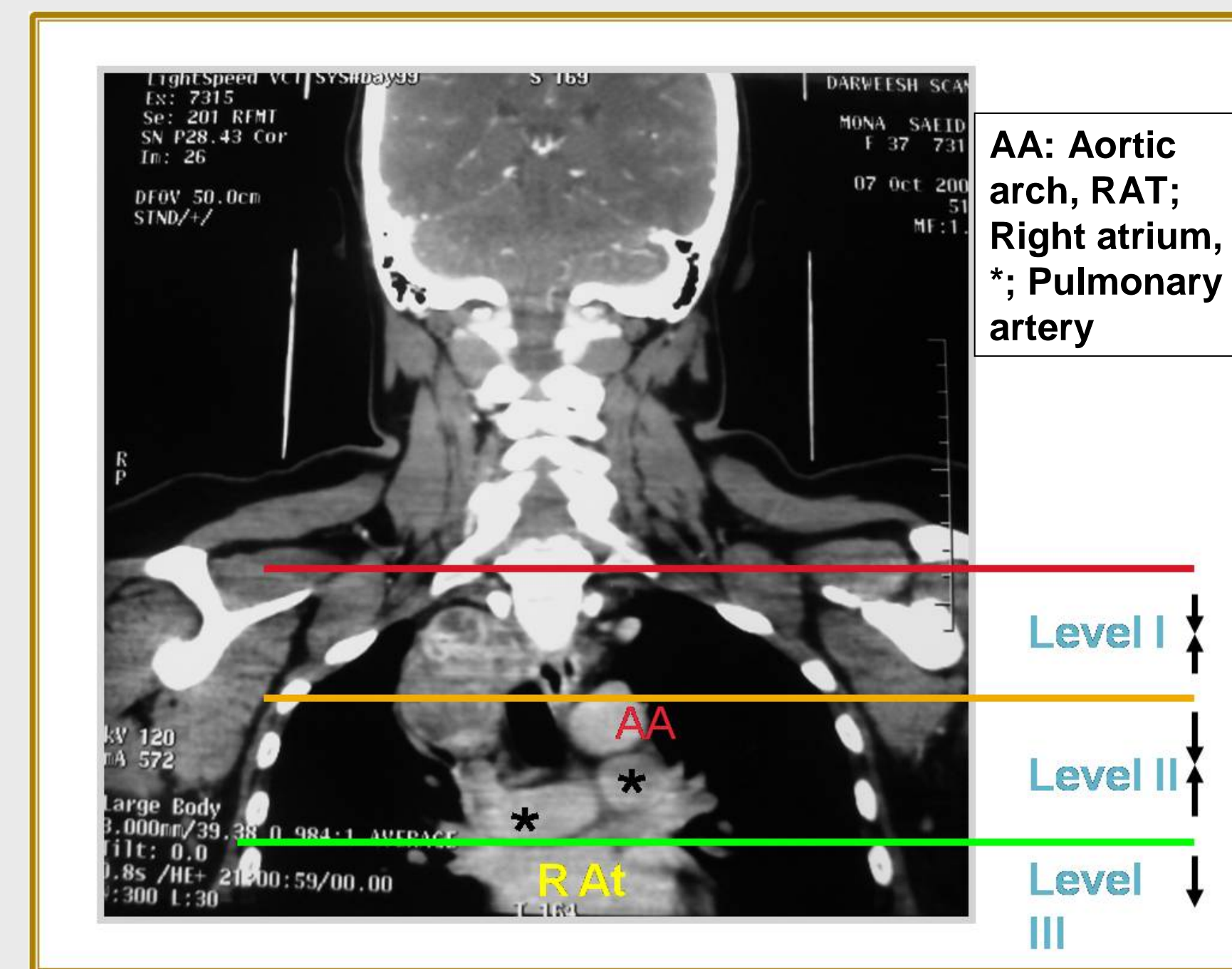
Charts were reviewed for demographic data, medical history, duration and nature of symptoms, physical examination, radiological work-up and treatment plan. Histopathological results of the resected lesions were also reviewed.



RESULTS



RESULTS



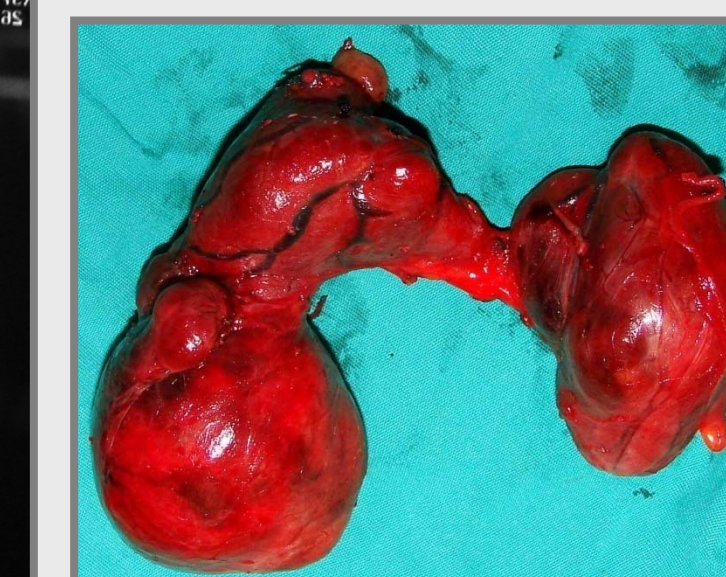
RESULTS

According to Histopathological

The goitre was benign 94% (49 cases were multinodular goiter and follicular adenoma in 3 cases. Malignant goiter was found in 6% of cases (2 papillary and 1 follicular carcinoma).

According to surgical approach

Cervical approach was used in 94% of cases while in 6% of cases intrathoracic approach was mandatory. The criteria of the 2 cases that required intrathoracic approach were situated in level I, located anteriorly in the mediastinum and of malignant nature.



CONCLUSIONS

- Cervical approach is optimum for benign retrosternal goiters reaching level I and level II whether situated anteriorly or posteriorly in the mediastinum.
- Malignant retrosternal goiters are better approached through intrathoracic approaches.

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