

Essential surgery



Ask Doctor Clarke

Course book sample

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Essential Surgery

Programme

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Important Note

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Head and Neck: Quiz

- 1) This woman is euthyroid and presents with a lump in the neck.

What are your findings on examination?



What is the likely diagnosis?

What are the indications for surgery?

- 2) What is the diagnosis?

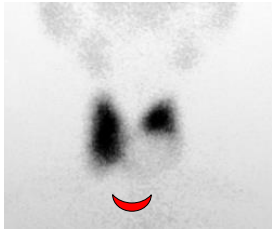


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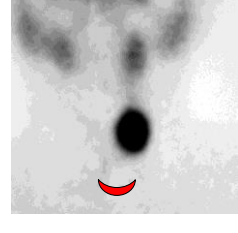
What are the indications for surgery?

What are the complications of a subtotal thyroidectomy?

- 3) Each of these two patients presented with a left-sided lump in the neck and radio-iodine scanning was performed.



Bill Fleming @endocrinesurgery.net.au



Bill Fleming @endocrinesurgery.net.au

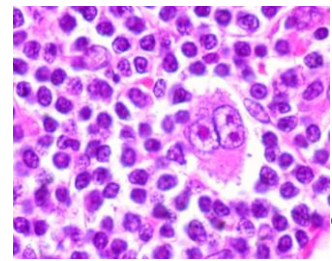
Supra-sternal notch

Supra-sternal notch

What do the radio-iodine scans show? What are the most likely diagnoses?

- 4) This woman has a history of night sweats for the last 6 months and now presents with a lump in the neck. The results of the excision biopsy are also shown.

What is the diagnosis?



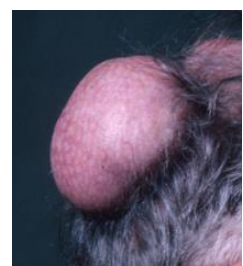
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- 5) Each of these patients presents with a swelling in the front of the neck, which transilluminates. What is the likely diagnosis? What other physical sign would you elicit?

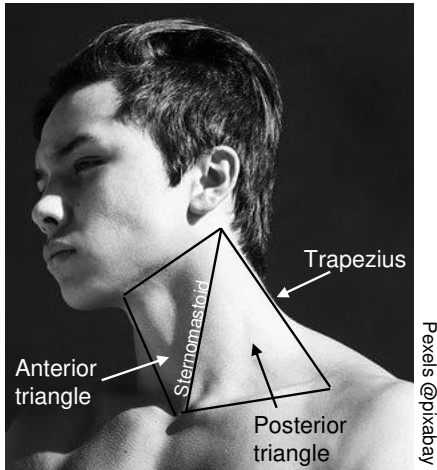


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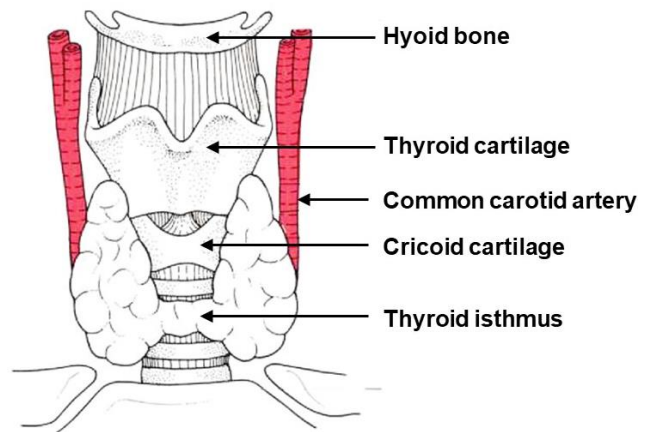
- 6) What is the likely diagnosis?



Head and Neck



Anterior and posterior triangles of the neck



Midline structures

Lumps in the neck

- Midline
 - goitre
 - thyroglossal cyst

- Lateral
 - lymph node
 - solitary thyroid nodule
 - vascular: aneurysm, carotid body tumour
 - sebaceous cyst / lipoma
 - cystic hygroma/ branchial cyst
 - salivary glands
 - nerve: neurofibroma

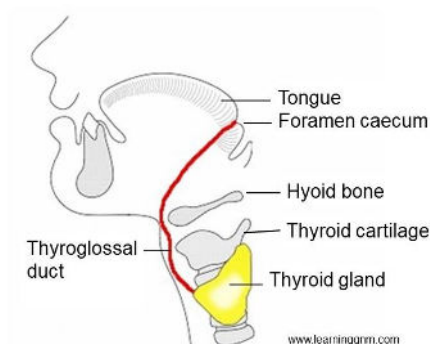
The Thyroid

Would you examine the neck?

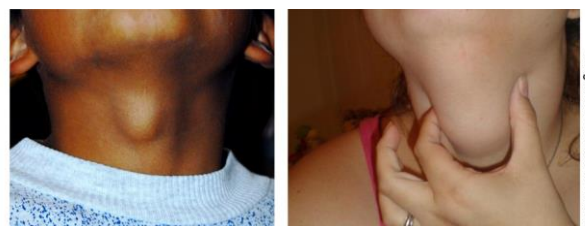
- "A symmetrical swelling in the front of the neck, consistent with a goitre"
- Need to offer to check peripheral thyroid status

Thyroid: inspect

- From in front and from the side
- Ask the patient to sip water, hold it, then swallow
- Goitre moves up on swallowing
- Stick out the tongue: thyroglossal cyst moves up (linked to foramen caecum: back of tongue)



Course of thyroglossal duct



Two patients with thyroglossal cysts

Thyroid: palpation

- From behind: swallow again
- Dimensions: diffusely enlarged or single nodule; what is its size?
- Edge: can you get below it? “*Catching the thyroid*”
- Surface: smooth or nodular
- Consistency: soft, firm, hard

Graves’ disease

- Goitre
- Eye signs
- Thyrotoxicosis

Indications for surgery

- Failure of medical treatment
- Large goitre
- Patient choice
- Intolerance of medication (eg rashes)

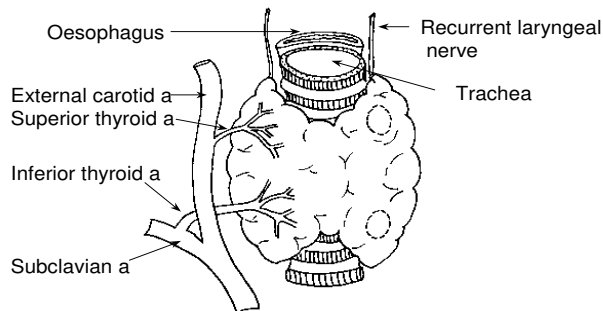
Complications of subtotal thyroidectomy

- Bleeding
- Thyroid crisis (hyperthermia, fast atrial fibrillation, pulmonary oedema)
- Hypoparathyroidism- hypocalcaemia (Chvostek’s sign and Trousseau’s sign)
- Damage to recurrent laryngeal nerve
- Late hypothyroidism
- Recurrent hyperthyroidism

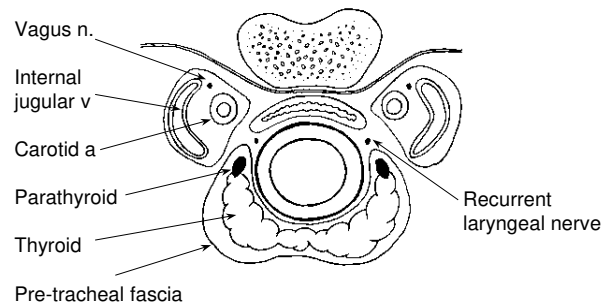
Subtotal thyroidectomy

- 30% late hypothyroidism
- 15% recurrent hyperthyroidism
- Move towards total thyroidectomy with thyroxine replacement for all
- But will the incidence of hypoparathyroidism increase?

The thyroid: view from in front



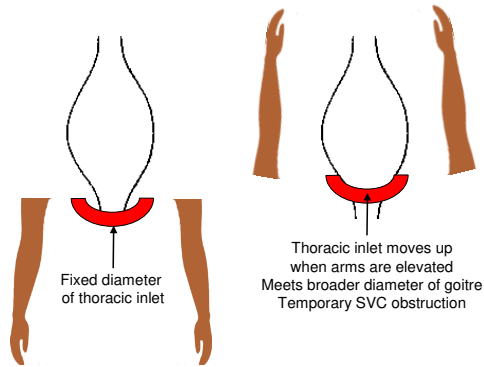
Transverse section through the neck



Commonest large goitre

- Multinodular goitre
- Patient usually euthyroid: rarely can go thyrotoxic (toxic multinodular goitre)
- Indications for surgery include cosmetic, patient choice and compression of local structures (change in voice or stridor)
- Pemberton’s test for a retrosternal goitre: patient raises the arms and holds them above head; elevates clavicles and raises thoracic inlet
- Pemberton’s sign: pink face due to temporary SVC obstruction; very occasionally causes stridor

Pemberton's sign

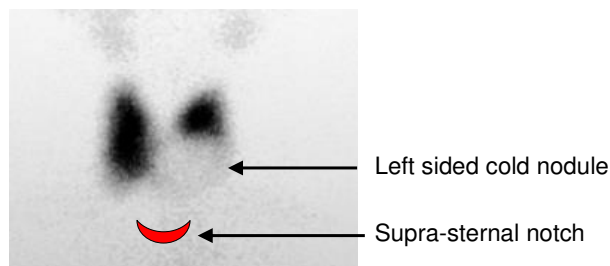


Goitre

- Simple goitre, physiological goiter, colloid goitre or non-toxic goitre- typically small and smooth; common
- Multinodular goitre: usually euthyroid; gland may be large; firm consistency; surface may feel smooth or nodular; common
- Graves- smooth, soft goitre +/- bruit
- Hypothyroidism- often no goitre (atrophic hypothyroidism)
- Hashimoto's- hypothyroidism with firm goitre, usually small/ medium size

Thyroid cancer

- Usually presents as a solitary nodule
- 95% of solitary nodules are benign (cysts, silent adenoma or toxic adenoma)
- 5% are malignant: diagnosis by radioiodine scan, ultrasound and fine needle aspiration



Type	%	Typical age	5 year survival	Spread
Papillary	75%	Young adults and all ages	98%	Local nodes Lymphatic spread
Follicular	20%	Middle aged	90%	Haematogenous Lungs, bone, brain
Anaplastic	3%	Elderly	Very poor prognosis	Locally invasive & haematogenous
Lymphoma	1%	Elderly	Variable; often poor prognosis	Lymphatic and haematogenous
Medullary	1%	Middle aged	80%	Local and haematogenous

Treatment of papillary and follicular (differentiated thyroid cancer)

- Total thyroidectomy (unless <1cm in size when hemithyroidectomy offered)
- Post-operative radioactive iodine taken up by any remaining thyroid tissue
- Follow up using thyroglobulin levels as marker

Medullary

- Rare tumour derived from parafollicular C cells
- Secretes calcitonin: check levels in patients with suspicious nodule
- 80% of cases sporadic
- 20% familial, autosomal dominant, part of multiple endocrine neoplasia type 2
- Associated with adrenal pheochromocytoma, primary hyperparathyroidism, mucosal neuromas