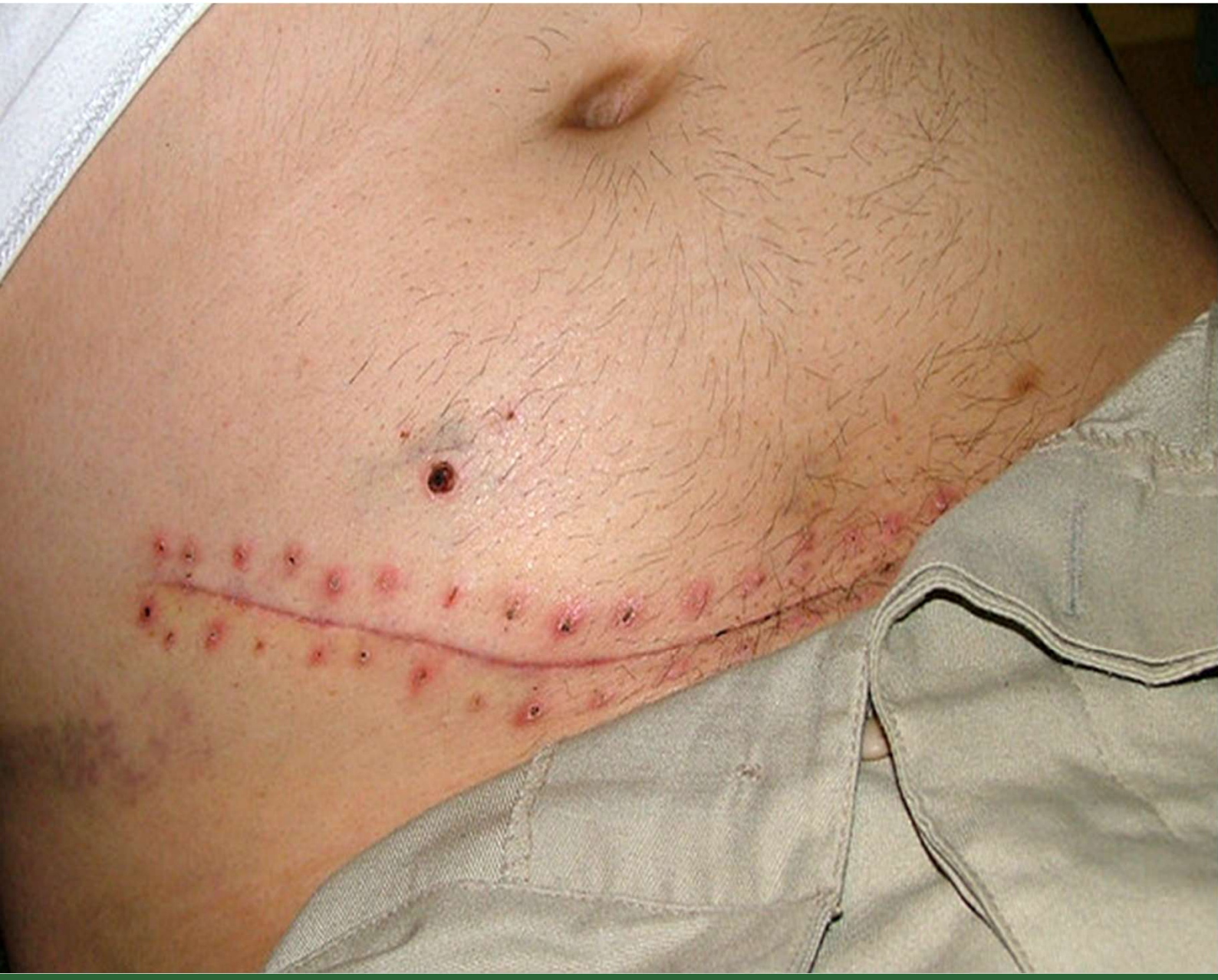
Essential surgery



Ask Doctor Clarke

Course book sample

2023-2024

Important note
These notes are presented in good faith and every effort has been taken to ensure their accuracy. Nevertheless, it is possible that some errors may have been overlooked. It is always important to check such information, particularly drug indications, contraindications and dosages, with your clinical teachers and with other reliable sources such as NICE, RCOG, RCPI and HSE. Disclaimer: no responsibility can be taken by Doctor Clarke or his co-lecturers for any loss, damage or injury occasioned to any person acting or refraining from action as a result of this information. Please give feedback on this document and report any inaccuracies or ambiguities to support@askdoctorclarke.com
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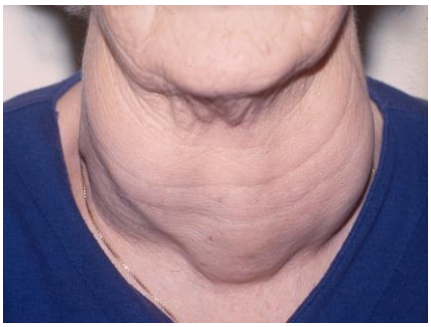
Essential Surgery

Programme

Important Note

Head and Neck: Quiz

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

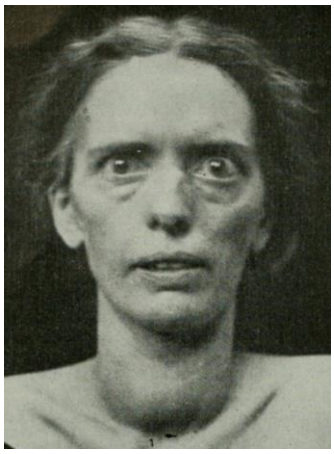


What are your findings on examination?

What is the likely diagnosis?

What are the indications for surgery?

2) What is the diagnosis?



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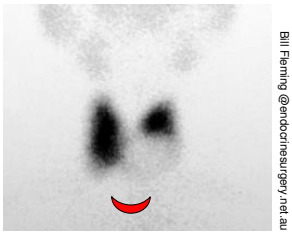
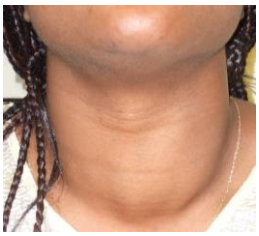
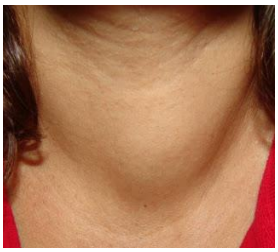
What are the indications for surgery?

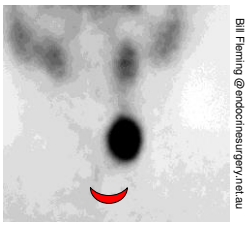
What are the complications of a subtotal thyroidectomy?

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









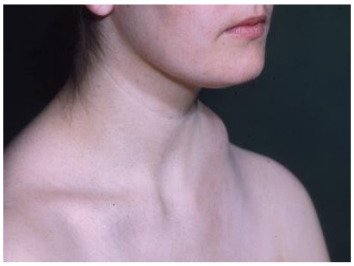
Supra-sternal notch

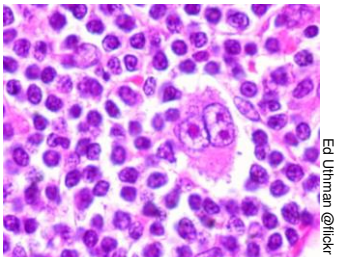
Supra-sternal notch

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

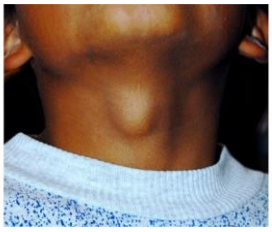
4) This woman has a history of night sweats for the last 6 months and now presents with a lump in the neck. The results of the excision biopsy are also shown.

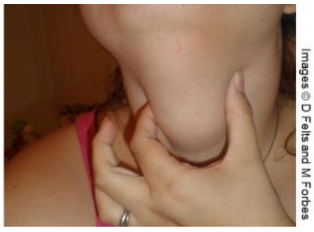
What is the diagnosis?



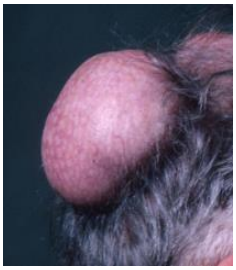


5) Each of these patients presents with a swelling in the front of the neck, which transilluminates. What is the likely diagnosis? What other physical sign would you elicit?

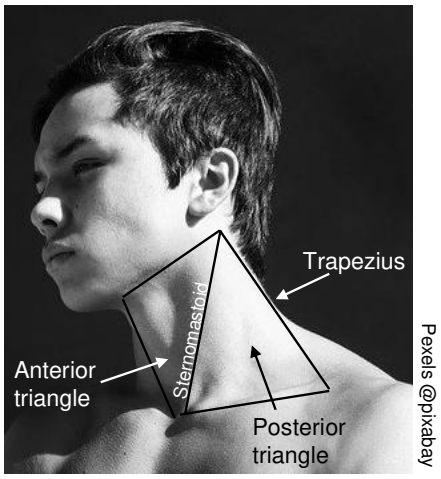




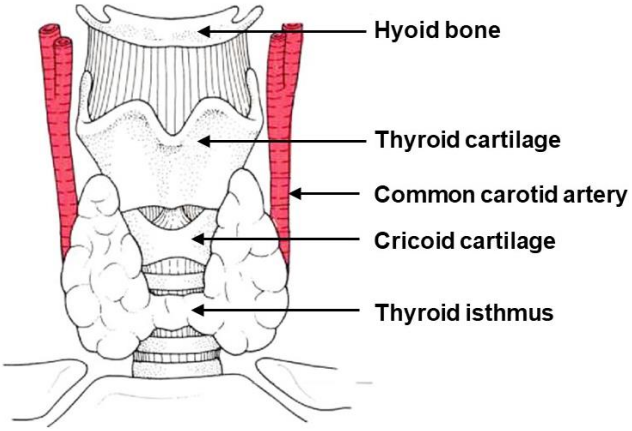
6) What is the likely diagnosis?



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

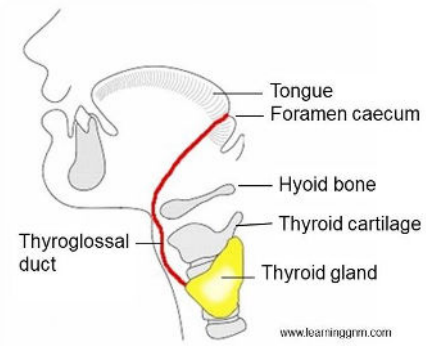
The Thyroid

Would you examine the neck?

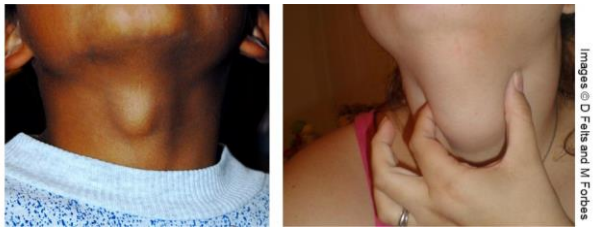
- "A symmetrical swelling in the front of the neck, consistent with a goitre"
- Need to offer to check peripheral thyroid status

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)

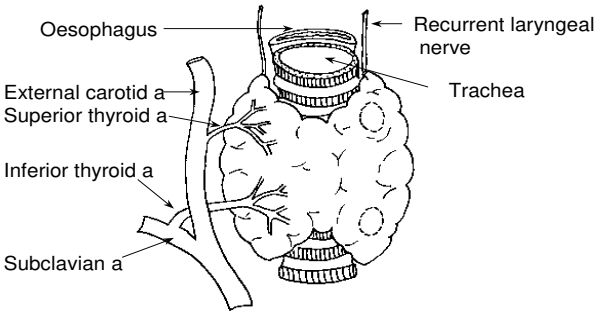
Complications of subtotal thyroidectomy

- 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

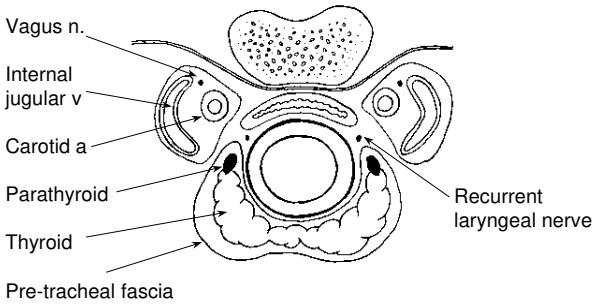
Subtotal thyroidectomy

- 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



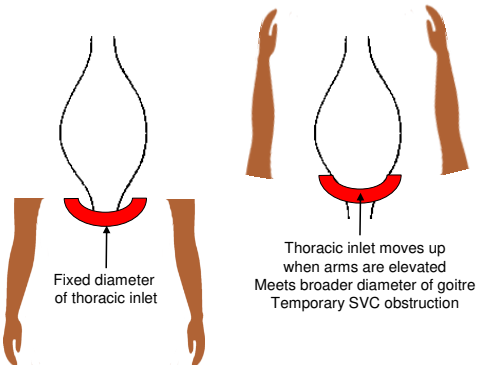
Transverse section through the neck



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

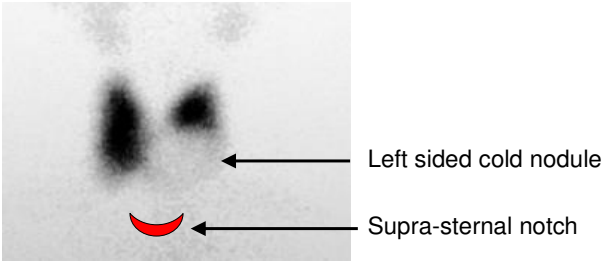


Goitre

- 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 phaeochromocytoma, primary hyperparathyroidism, mucosal neuromas