Surgical Conditions of the Thyroid and Parathyroid Glands:

A quick reference guide for GPs

Common thyroid disorders

Solitary nodules – often require characterisation with ultrasound +/- fine needle aspirate to determine likelihood of malignancy

Multinodular goitre – usually benign but may cause compressive symptoms

Graves’ disease – autoimmune stimulation of TSH receptors leading to hyperthyroidism

Thyroid cancer – important risk factors include family history and a history of radiation exposure. Readily treatable with surgery, often in conjunction with radioactive iodine

Hashimoto’s thyroiditis – usually self-limiting, can cause hyperthyroidism (early) or hypothyroidism (late). May benefit from surgery if associated with ongoing pain

Thyroglossal cyst – presents as a midline lump above the thyroid cartilage (Adam’s apple), may become inflamed or form fistulas to the overlying skin

Common symptoms of thyroid disease

Symptoms of hyperthyroidism

Tiredness

Palpitations

Tremor

Sweats

Heat intolerance

exophthalmos

Diarrhoea

Weight loss

Menorrhagia

Symptoms of hypothyroidism

Lethargy

Weight gain

Weakness

Cold

Hair loss

Compressive symptoms

Lump in the neck

Dysphagia

Dyspnoea

Voice change

Workup for thyroid disorders

Most thyroid disorders requiring surgical intervention can be diagnosed with a ***thyroid ultrasound*** and ***thyroid function tests***.

If a patient is biochemically hyperthyroid, a ***thyroid nuclear scan*** ***and anti-TSH receptor antibodies*** are useful to determine the underlying cause (eg Graves’ disease, toxic nodule or toxic goitre). ***Thyroid antibodies*** can also determine if there is underlying thyroiditis. All patients with thyroid disease should also undergo screening for concurrent parathyroid disease with ***PTH***, ***calcium*** and ***vitamin D*** levels.

A nodule with suspicious features on ultrasound (increased vascularity, microcalcifications, irregular border) should ***undergo ultrasound-guided fine needle aspirate***.

Which nodules should undergo fine needle aspirate?

* Nodules <1 cm
  + If there are suspicious features on ultrasound (irregular border, microcalcifications, increased vascularity)
  + Nodules without suspicious features less than 1 cm can be re-evaluated with an ultrasound in 1 year
* Nodules 1 to 3 cm
  + Should undergo FNA, especially if there are suspicious features
* Nodules >3cm
  + Should undergo FNA
  + These nodules are more likely to become symptomatic and there is an increased risk of a false negative FNA with nodules of this size. They should therefore be considered for excision via a hemithyroidectomy. An FNA can determine if a total thyroidectomy is preferred in the case of malignancy.

Parathyroid disease

Simple screening with ***calcium*** and ***PTH*** levels can detect hyperparathyroidism before symptoms become evident. Patients with osteoporosis, recurrent kidney stones or pathological fractures should be tested, as well as with an ***ultrasound*** to look for concurrent thyroid issues.

About Suren

Suren is a graduate of Monash University (Bachelor of Medicine, Bachelor of Surgery, 2000) and has been a fellow of the Royal Australasian College of Surgeons since 2009.

Suren's surgical interests include benign and malignant disease of the thyroid and parathyroid glands, endoscopic trans-axillary and trans-oral thyroid surgery, and management of adrenal disease.  He is the head of paediatric endocrine surgery at Monash Children's Hospital.

He is happy to perform ultrasound-guided fine needle aspirates for most thyroid nodules as required, at an advantage to patients in terms of time and cost.

Away from medicine, Suren is a classically-trained flautist and jazz saxophonist who plays with the Australian Doctors Orchestra.  He is a keen follower of the Hawthorn football club and the Sri Lankan cricket team.  Suren travels to Sri Lanka regularly with projectBEAP, a charity currently building a trauma centre on the east coast, a region affected by the Boxing Day tsunami and civil war.

Suren has public appointments with Monash Health (Clayton, Dandenong, Berwick and Moorabbin), Eastern Health and St Vincent's. He is an accredited specialist surgeon at The Valley, The Avenue, Epworth Richmond and St John of God Private Hospitals.

Endocrine conditions:

Thyroid nodules

Thyroid cancer

Graves’ disease/thyrotoxicosis

Multinodular goitre

Parathyroid disease

Adrenal disease

General surgical conditions:

Laparoscopic cholecystectomy

Abdominal hernias (inguinal, umbilical, incisional)

Lipomas

Skin lesions

Carpal tunnel release

Ingrown toenails

Vasectomy