Post operative complications following thyroidectomy

They include:

1. haemorrhage
2. respiratory obstruction
3. recurrent laryngeal nerve paralysis
4. thyroid insufficiency
5. parathyroid insufficiency
6. thyrotoxic storm (crisis)
7. wound infection
8. hypertrophic or keloid scar
9. stitch granuloma

Haemorrhage

1. ***Tension haematoma*** deep to the cervical fascia is usually due to slipping of ligature on the superior thyroid artery or occasionally from the thyroid remnant or middle thyroid vein.

It maybe necessary to open the layers of the wound not simply the skin stiches to relieve tension before taking the patient to the theater to evacuate the haematoma and secure the bleeding vessel.

2. ***Subcutaneous haematoma*** or collection of serum may form under the skin flaps and should be evacuated or aspirated in the following 72 hr.

Respiratory obstruction

Most cases due to laryngeal oedema which is mainly due to tension haematoma. Also trauma to the larynx by the anesthetic tube and surgical manipulation are important factors, particularly if the goiter is very vascular and may cause laryngeal oedema without tension haematoma.

Another cause is recurrent laryngeal nerve paralysis (unilateral or bilateral) especially if associated with laryngeal oedema.

If releasing tension haematoma do not immediately relieve airway obstruction, the trachea should be intubated at once, which can be left in place for several days.

Steroids are given to reduce oedema. Tracheostomy is rarely indicated. If so urgent, needle tracheostomy as a temporary measure using 12 G needle (diameter 2-3 mm) is highly satisfactory.

Recurrent laryngeal nerve paralysis

This may be unilateral or bilateral, transient or permanent.

Transient paralysis occurs in about 3% of nerves at risk and recovers in 3 weeks to 3 months. Permanent paralysis is extremely rare if the nerve is identified at operation.

Thyroid insufficiency

This usually occurs within two years and sometimes delayed for 5 years or more. It is often insidious and difficult to recognize.

The incidence is 20-45% after operations.

The causes of thyroid insufficiency are:

1. *Change in autoimmune response from stimulation to destruction of the thyroid cells.*
2. *There is relation ship between the estimated weight of the thyroid remnant and the development of thyroid failure after subtotal or near total thyroidectomy for grave's disease.*

Thyroid insufficiency is rare after surgery for toxic adenoma because there is no autoimmune disease present.

Parathyroid insufficiency

It is due to:

1. removal of the parathyroid glands
2. infarction through damage to the parathyroid end artery (more important than the first cause)

The incidence should be less than 0-5% and most cases present dramatically 2-5 days post operatively and very rarely delayed presentation for 2-3 weeks.

Thyrotoxic crisis (storm)

This is an acute exacerbation of hyperthyroidism. It occurs if a thyrotoxic patient has been inadequately prepared for thyroidectomy.

This require administration of intravenous fluid, cooling the patient with ice packs, giving O2, diuretics for the heart failure, digoxin for uncontrolled AF, sedation and intravenous hydrocortison.

Specific treatment is by carbimazole 10-20 mg 6 hourly, lugol's iodine 10 drops 8 hourly by mouth or sodium iodide 1 gm I.V., propranolol 40 mg 6 hourly orally will block the adverse B adrenergic effect. This agent may be given by careful I.V administration (1-2 mg) under precise ECG control.

Wound infection

Subcutaneous or deep cervical abscess should be drained.

Hypertrophic or keloid scar

It occur if the incision overly the sternum. The intradermal injection of corticosteroid should be given at once and repeated monthly if necessary.

Stitch granuloma

This may occur with or without sinus formation and is seen after the use of non absorbable suture material.

Absorbable sutures and ligatures should be used through out the thyroid surgery.

If the skin staples are used, they can be removed in less than 48 hrs because the skin closure is supported by platysma stitch.