Solitory thyroid nodule (STN)

STN 4%

Thyroid cancer 40/million

History

- Pain

- Dysphagia

- Dysphnea

- Choking

- Hoarseness

- History of exposure to ionizing radiation

- Family history of thyroid malignancy

STN+ history of low- dose RT chance of cancer 40%

Family history MTC

Physical examination

Diagnostic investigations

FNA

Benign 65%

Suspicious 20% → 20%

Malignat 5%

Nondiagnostic 10%

False positive – 1%

False negative 3%

Labrator studies

TSH

Serum calcitonin :

RET oncogene

MTC patients ***VMA***

Metanephrin

Catecholamin

Imaging : ultrasound ***cystic***

solid

lymphadenopathy

CT or MRI : large and retrosternal lesions

Thyroid scan :

Folicular thyroid nodule on FNA and suppressed TSH

Management :

Malignant ⟶ surgery

Cystic ⟶ reaspiration

After three aspiration surgery

Colloid nodule :

Observed

Ultrasound

TG

Compressive symptoms and cosmatic reason surgery

Family history

Irradiation history : Total or near -total thyroidectomy

Malignant thyroid disease 5% of all malignancy 2% women and 0.5% mens

Papillary carcinoma.

- 80% of all thyroid malignancy

- Predominant thyroid cancer in children

- 2/1 female to male ratio

- Mean age 30-40 years

- Most paitents are uthyroid

- Slow – growing

- Painless mass

Dysphagia
Dyspnea ***Locally advance***
Dysphonia

Lymph node metastases are common especially in children and young adults .

Distant metastases in 20%

Most common sites lungs , bone , liver and brain

Pathology

- ***Psammoma bodies***
- ***Calcification***
- ***Multifocality 85%***
- ***Minimal or occult microcarcinoma***

Prognostic indicators :

PTC have an excellent prognosis >95% longer survival

AGES scoring system

A: Age

G: Histologic grade

E: Extrathyroid invasion and metastases

S: Size

MACTS

AMES

TNM

Surgical treatment :

Total or near- total thyroidectomy

- ***Lobectomy and isthmectomy (minimal papillary. Carcinoma)***
- ***Lymph node dissection***
- ***RAI I31***

Follicular carcinom

10% of thyroid cancers

Female/ male 3/1

Mean age so years

Presentation : ***- solitary thyroid nodule***

- long- standing goiter

Cervical lymphadenopathy is uncommon

FNA unable to distinguish

Malignancy defined by :

- *Capsular invasion*
- *Vascular invasion*

Treatment : ***Total thyroidectomy***
lymph node dissection

Hurthle cell carcinoma :

3% all thyroid cancer

FNA not diagnostic

More often multifocal and bilateral (30%)

Don't uptake RAI

More likely metastasis to local nodes (25%)

Treatment similar to follicular carcinoma :

Total thyroidectomy

Routin central neck node dissection

Medullary carcinoma :

5% of thyroid cancers arises from the parafdlicular or C cells.

Secret calcitonin :

- *25% heriditary*
- *Familial MTC , MEN2A , MEN2B.*
- *Mutation in RET proto- oncogene*
- *Cervical lymphadenopathy 15-20%*
- *Pain is more common*
- *Distant metastases*

Liver – bone and lung

Female to male 1.5/1

Calcitonin and CEA

Cushing's syndrome 2-4%

Diagnosis : history physical exam

Calcitonin

CEA

FNA

Treatment >50% bilateral

Total thyroidectomy

I_{131} therapy not effective

Modified radical neck dissection

Tumors > 1cm ipsilaterel prophylaenic

Modified neck dissection

External beam radiation :

Unrespectable

Residual

Recurrent

Anaplastic carcinoma :

1% of all thyroide malignancy in women more common 7^{th} and 8^{th} decade

Long- standing neck mass :

Rapidly enlarging and painful

Dysphonia , dysphagia and dyspnea

Fixed to surrounding structures

Lymphadenopathy

Diagnosis FNAB

Should be differentiated by lymphoma and MTC

Treatment :

All forms of treatment have been disappointing

Thyroidectomy if possible

Cembined chemoradiation and adjuvant in resectable patients prolonged survival.

Tracheostomy may be needed to alleviate airway obstruction.