Thyroiditis

Inflammation of Thyroid Gland

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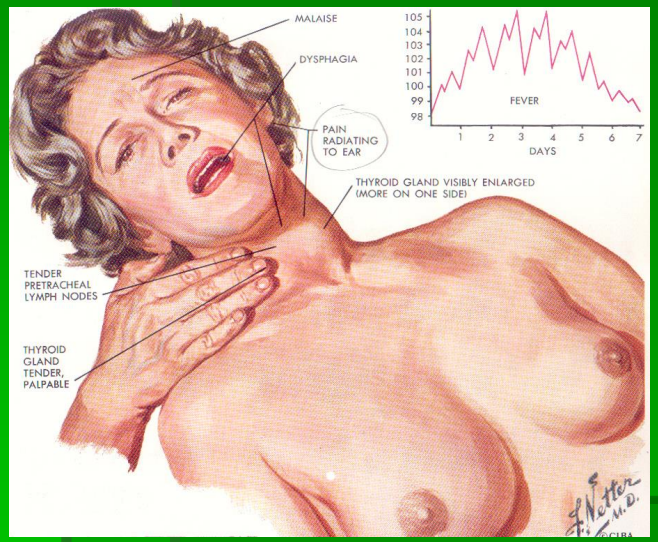

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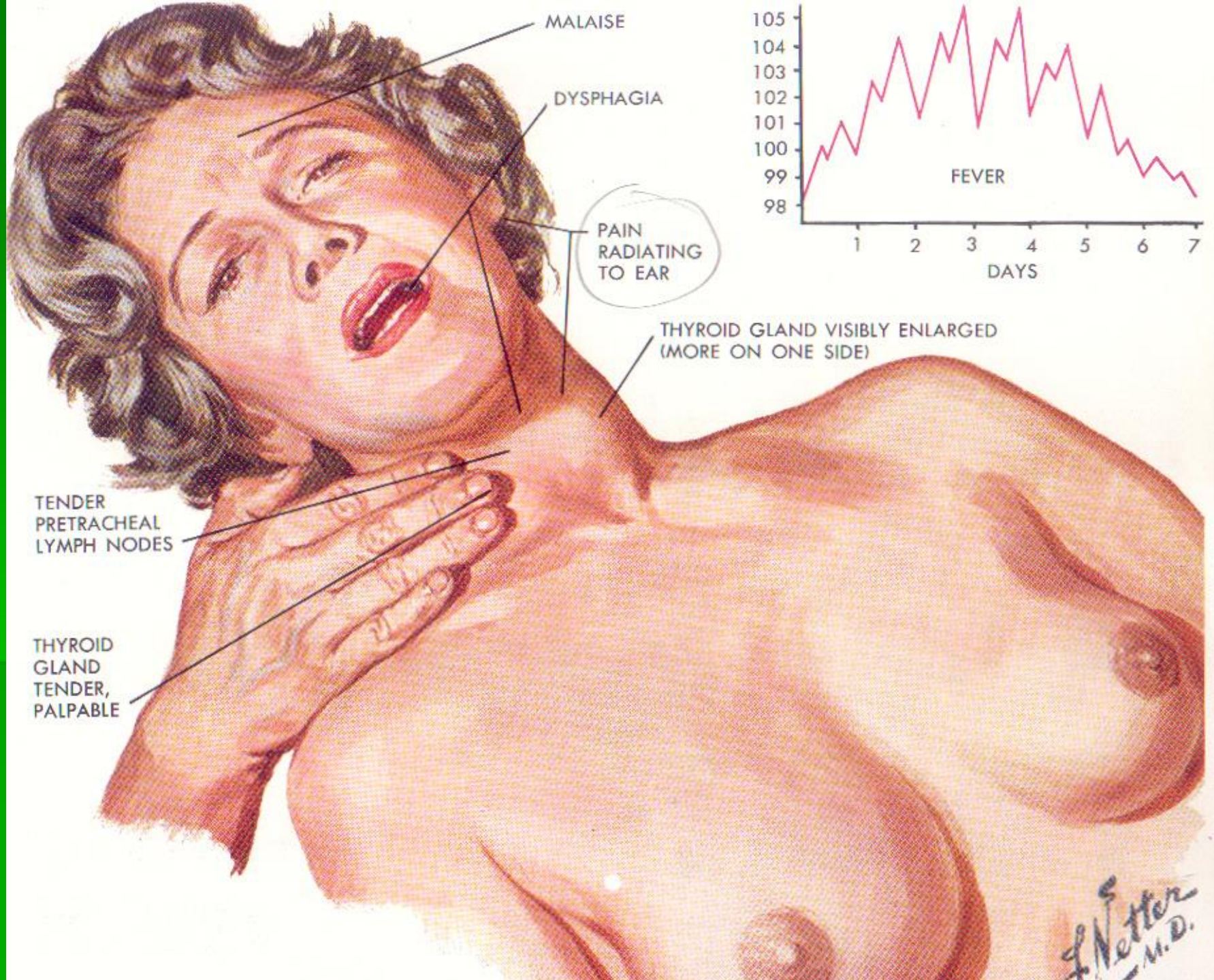
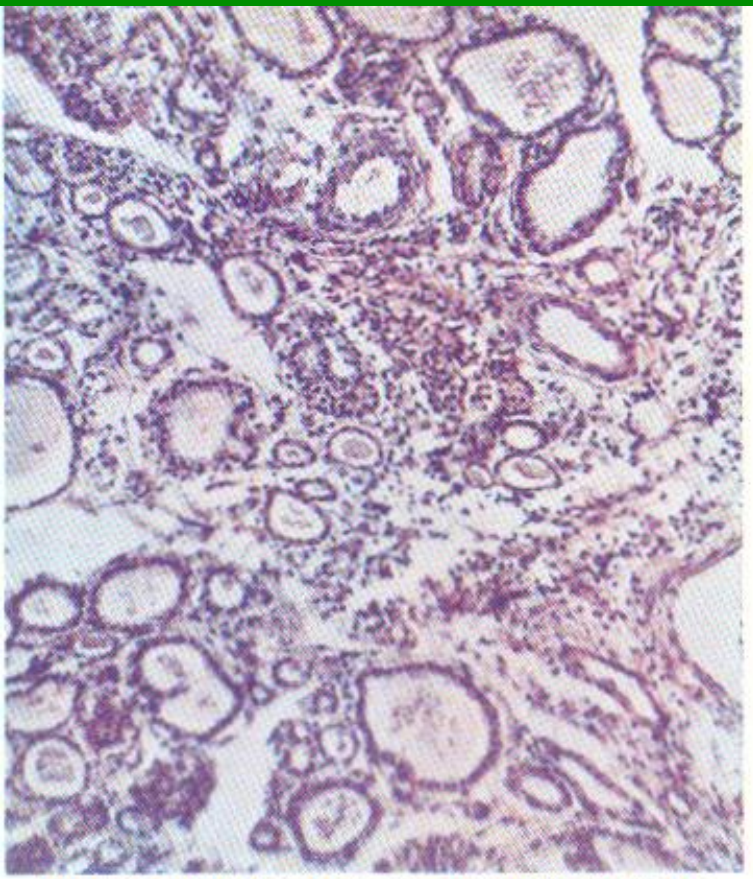
TABLE 1 -- Classification of Thyroiditis	
Histologic classification	***Synonyms***
Chronic lymphocytic	Chronic lymphoctic thyroiditis, Hashimoto's thyroiditis
Subacute lymphocytic	Subacute lymphocytic thyroiditis: (1) postpartum thyroiditis and (2) sporadic painless thyroiditis
Granulomatous	Subacute Granulomatous thyroiditis, de Quervain's thyroiditis
Microbial inflammatory	Suppurative thyroiditis, acute thyroiditis
Invasive fibrous	Riedel's struma Riedel's thyroiditis

Acute Suppurative Thyroiditis

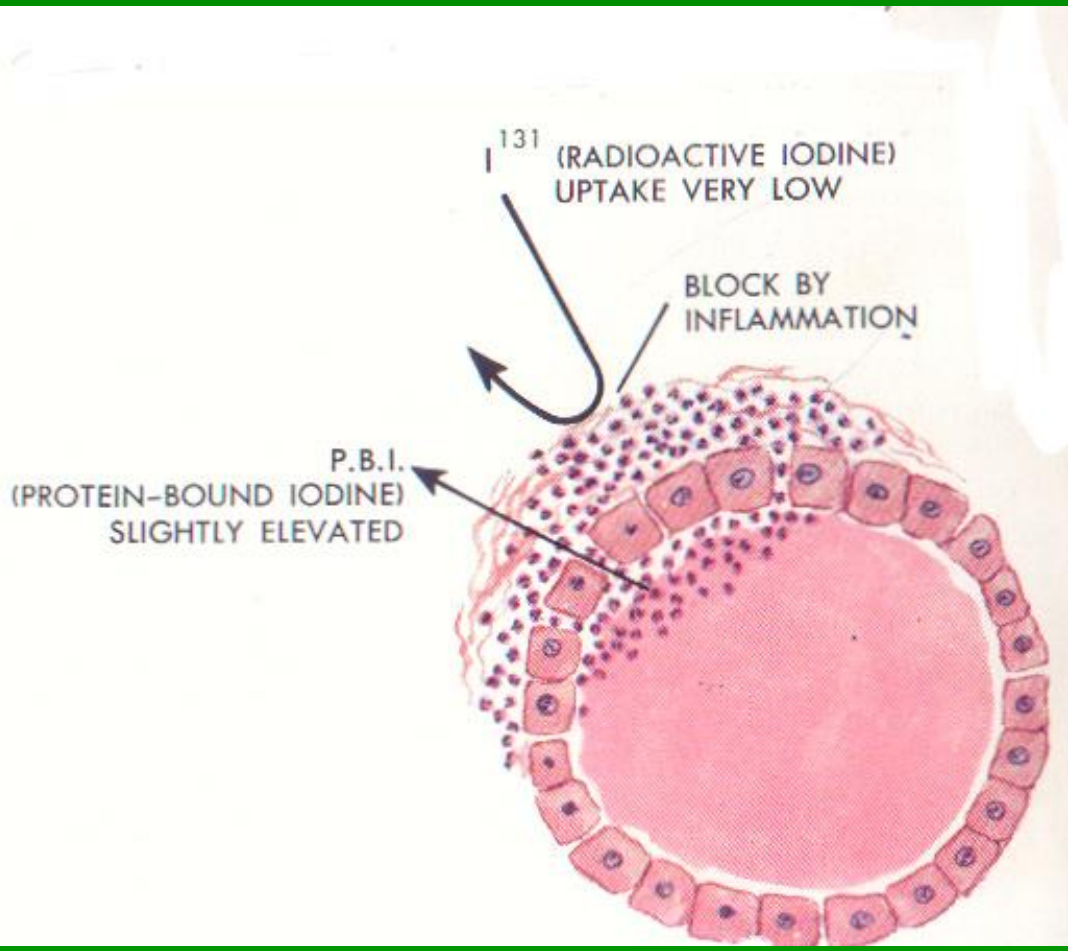
- Rare
- Acute infective process in neck
- Signs and symptoms of abscess
- High grade fever
- Dysphasia
- Malaise
- Pain radiating to Ear
- Tender and hot goiter involving one lobe
- Tender lymph node in neck


MALAISE
DYSPHAGIA
PAIN RADIATING TO EAR
THYROID GLAND VISIBLY ENLARGED (MORE ON ONE SIDE)
TENDER PRETRACHEAL LYMPH NODES
THYROID GLAND TENDER, PALPABLE
105
104
103
102
101
100
99
98
FEVER
1
2
3
4
5
6
7
DAYS

Histopathology



DIFFUSE INFILTRATION OF THYROID STROMA



Acute Suppurative Thyroiditis

- Dfferential Dignosis
  - All DD of Thyroid swelling
  - Acute stage of de Quervain's disease
- Management
  - Management of acute infection
  - Incision and drainage,
  - Aspiration must before you plan a drainage

Subacute Thyroiditis de-Quervain's disease

- Self limiting inflammatory condition of Thyroid gland, lasting for a week or two to months.
- Marked tendency to recur.
- Depression of Normal Iodine Metabolism

de-Quervain's disease

CLINICAL FEATURES

- Subacute onset 55%
  - Pain in neck
  - Malaise
  - Firm irregular enlargement of lobe or complete gland.
  - Pain, fever, malaise
- Acute onset 10%
  - Painful goitre
  - Hyperthyroidism
- Asymptomatic 35%
  - only for goitre.

- *A painful thyroid following an upper respiratory tract infection is usually a sign of subacute, granulomatous thyroiditis.*

- **Aetiology :**
  - Viral origin – associated with epidemic of mumps. Viral culture not possible.
  - Allergic

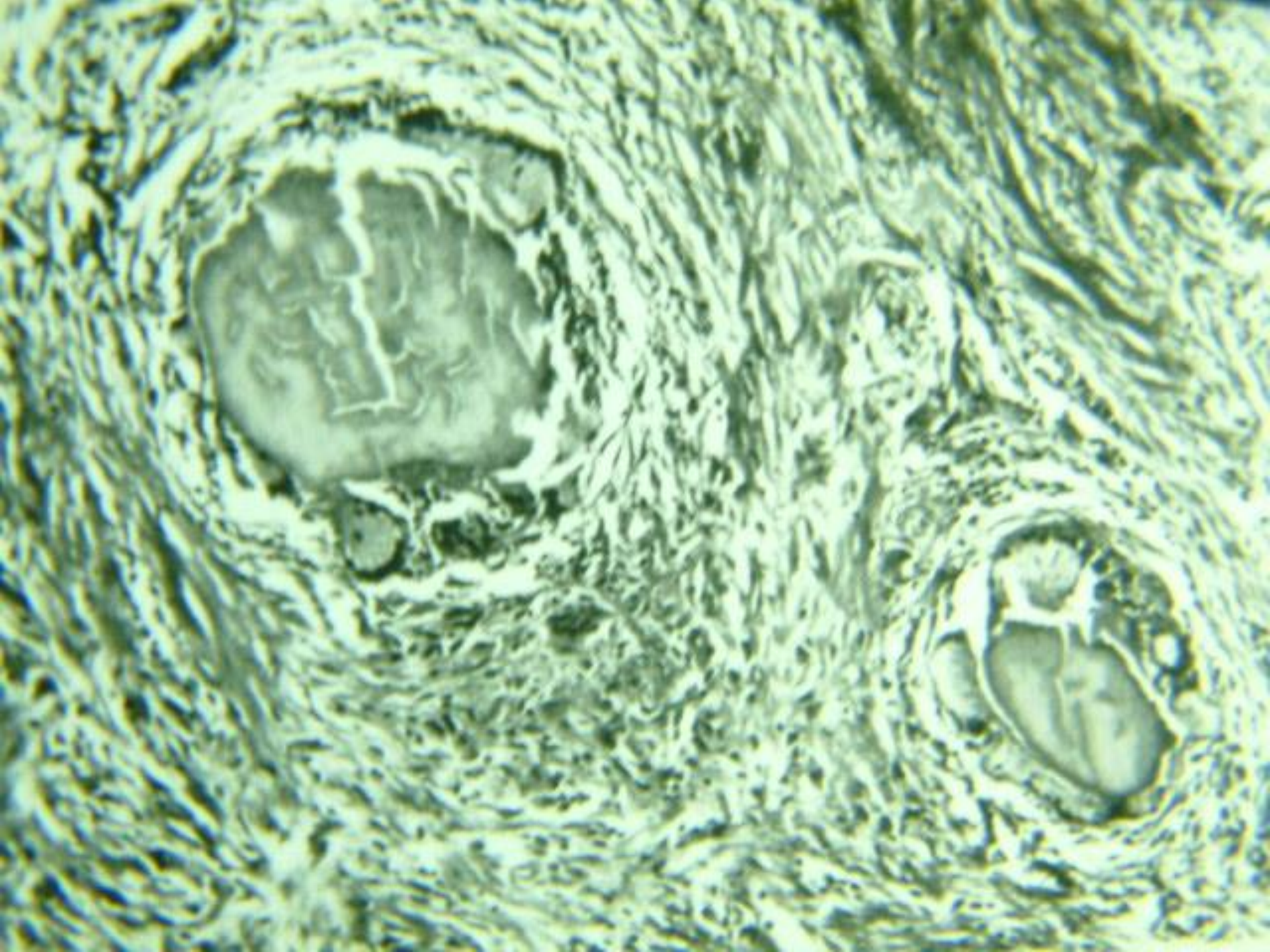
Pathology Macro :

Goitre firm rubbery irregular enlargement of thyroid one lobe or complete gland.

Yellow brown irregular focus firm in consistency

Histopathology :.

- Cluster of broken down follicles, surrounded by polymorphonuclear cells
- Giant cell eating follicle stroma is Fibrotic round cell infiltration.



de-Quervain's disease
INVESTIGATIONS

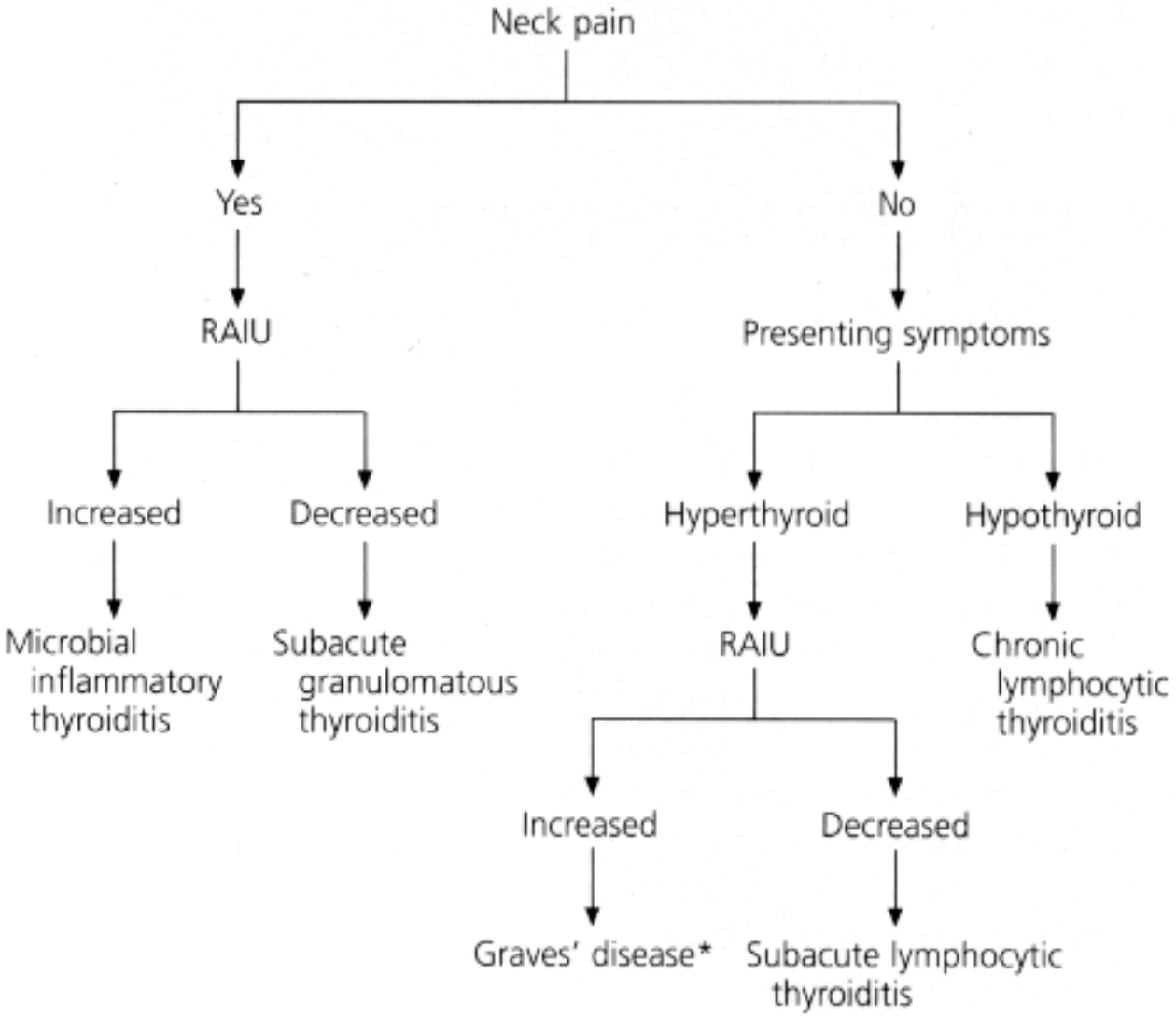
- ESR
- Absent thyroid antibodies
- Serum T4 slightly raised, high normal.
- I 131 uptake low
- **FNAC**
- Excisional biopsy

de-Quervain's disease

MANAGEMENT

- Self limiting disease
- subsides within few months
  - Analgesics
  - Heat
  - Prednisolone 10 to 20 mg daily x 7 days taper down gradually over a month.
  - Thyroxine given if tenderness continues for a longer time.
- **INDICATION OF SURGERY :**
  - When suspicious of malignancy.
  - Conservative subtotal lobectomy

Differentiating Thyroiditis



*—*Graves' disease is not a subtype of thyroiditis.*

Autoimmune Thyroiditis

- Associated with raised thyroid antibodies
- Family history common
- Associated with other autoimmune disease

Thyroid Antigens:

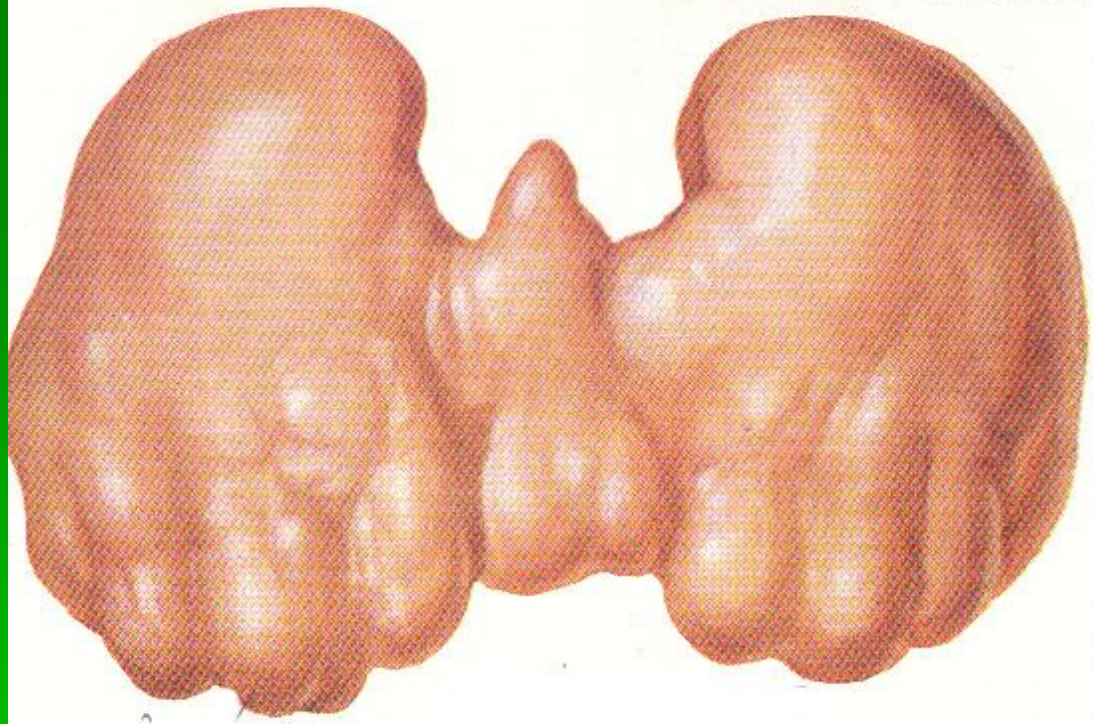
Site of Antigen	Antibody	Test	Significant Titres
Thyroid Cytoplasm	Microsomal antigen	1.Complement Fixation Test 2. Immuno-Fluorescent Test	1.64
Thyroid Colloid	1. Thyroglobulin Antibody	1. Precipitin	+ve 1: 25,000 TRe
	2. Second Colloid Antobody	2.Tanned red cells immuno fluorescent test	1: 2500

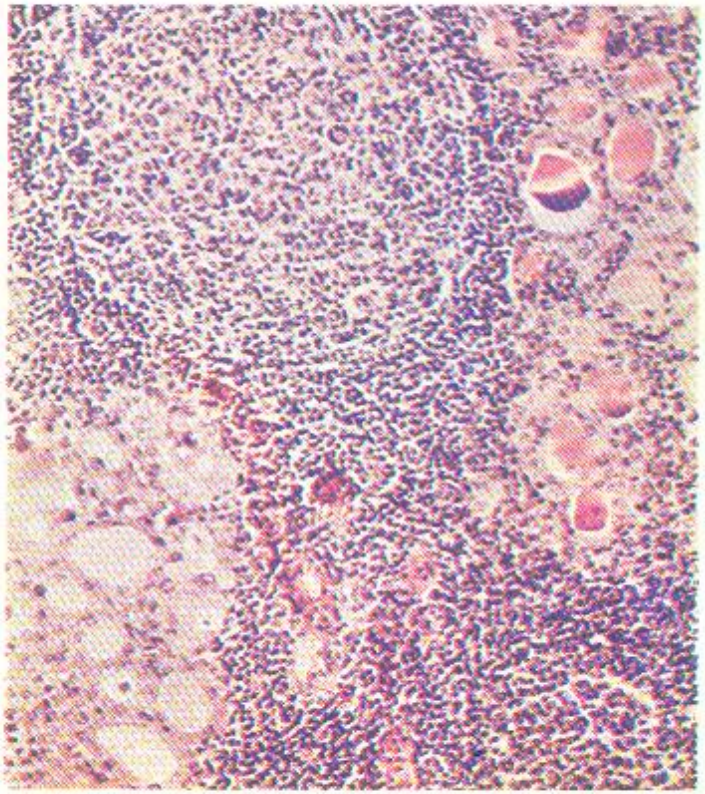
- The three main serologic markers of autoimmune **thyroid** disease are antibodies against thyroglobulin (the large protein on which T3 and T4 are synthesized and subsequently cleaved), **thyroid** microsomal antigen (a **thyroid** hormone synthetic enzyme also known as **thyroid** peroxidase, TPO), and the thyrotropin receptor

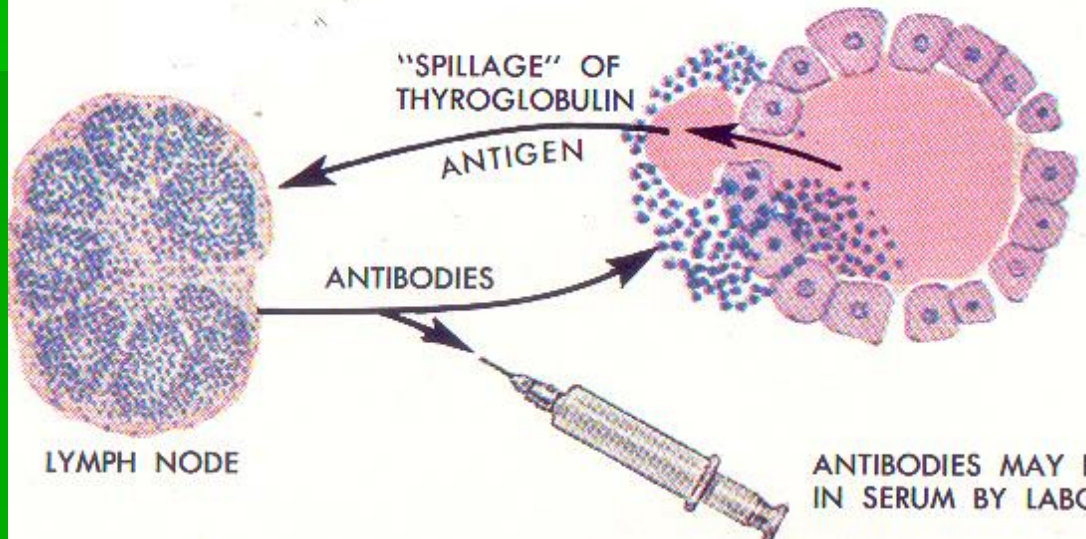
PATHOLOGY OF AUTO-IMMUNE THYROIDIS:

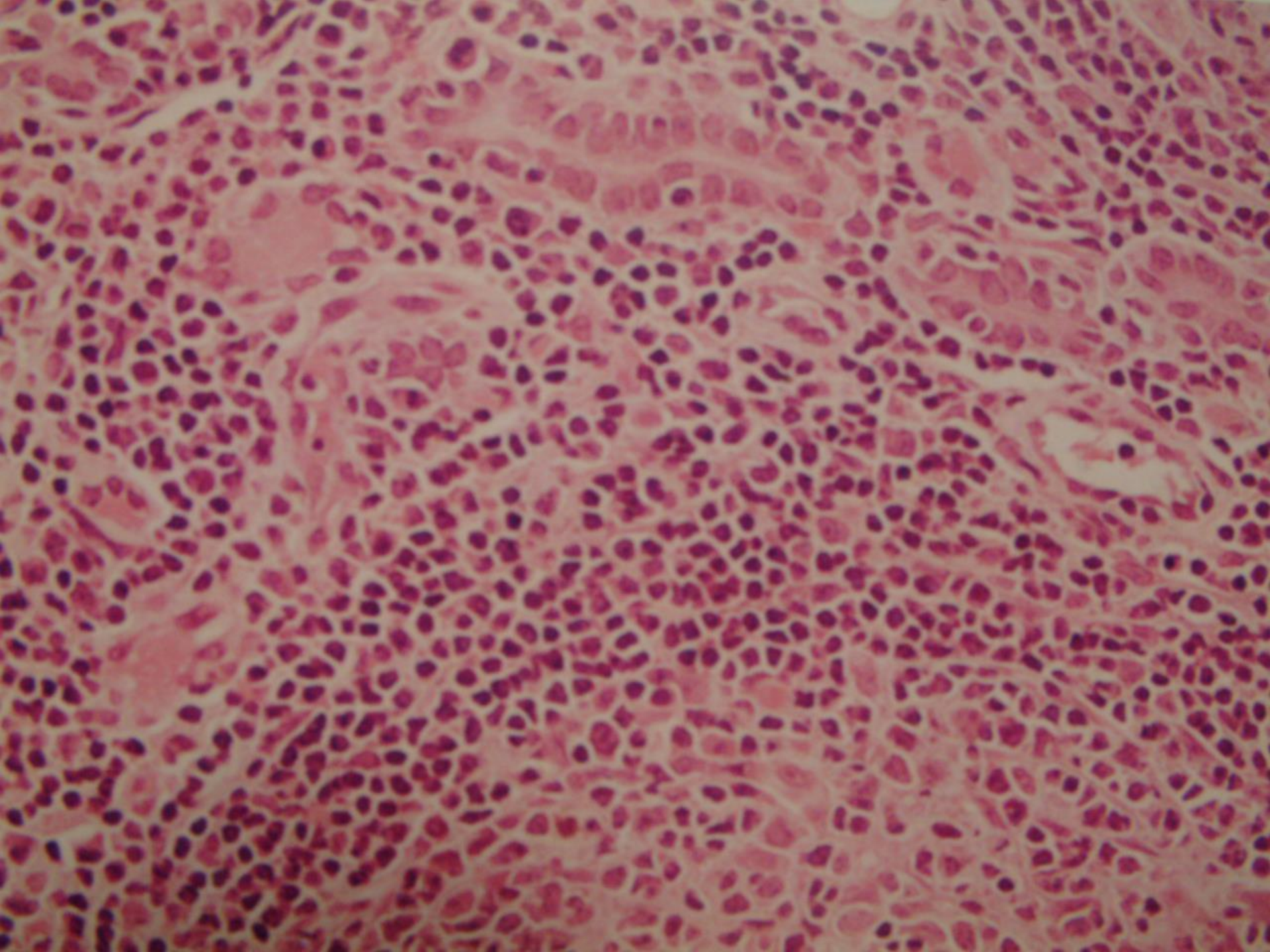
- Macro
  - Diffuse enlargement of gland to several hundred gms : 50 to 100 gms. commonly.
  - Gland lobulated, capsule not adherent
  - Cut surface yellow brown.
- **HISTOPATHOLOGY:**
  - Follicles are smaller in size.
  - Colloid is scanty.
  - Follicular epithelium is acidopjilac.
  - Intrafollicular infiltration with Lymphocyte, plasma cells, secondary lymphoid nodules occasionally considerable stromal fibrosis diffuseness of involvement is charactering

HASHIMOTO'S STRUMA









CLINICAL TYPES

1). **Focal :**

- **Usually associated with toxic goitre.**
- **Warning that postoperative thyroidism is likely.**

2).Diffuse non goitrous :

- **Primary Myxoedema**

3)Hashimoto's disease,

- Diffuse goitrous more common in women at menopause
- Insidious onset, asymptomatic goiter.
- Acute, painful goiter like acute form of de Quervain's disease,
- Hyperthyroidism initially ------- Hypothyroidism
- Lobulated thyroid swelling
- Diffuse or localized to one lobe
- Firm rubbery consistency depending upon cellularity and Fibrosis
- May have pressure symptoms.

Differtial Dignosis.

- Nodular goitre (MNG)
- Carcinoma
- Malignant lymphoma

.**Investigations :**

Thyroid antibodies

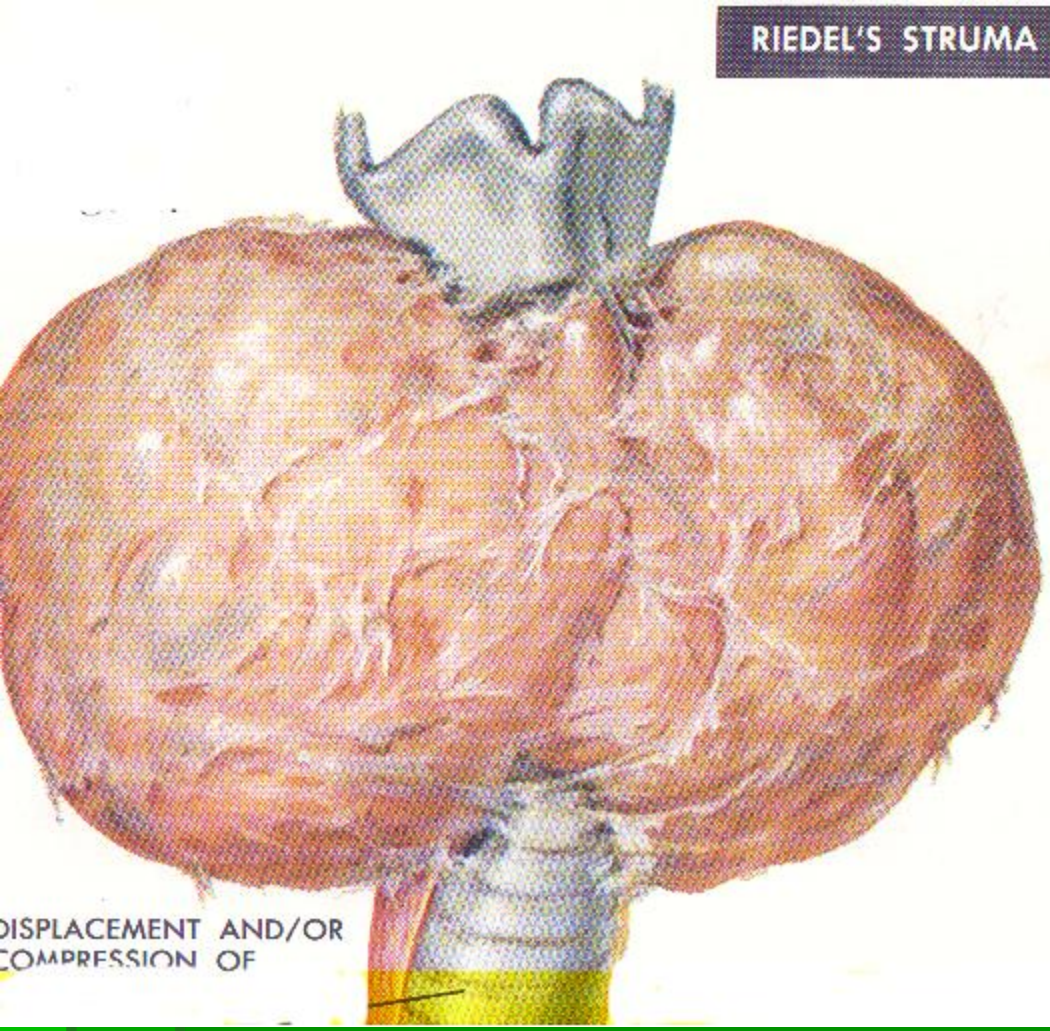
High T131 uptake in first 48 hrs

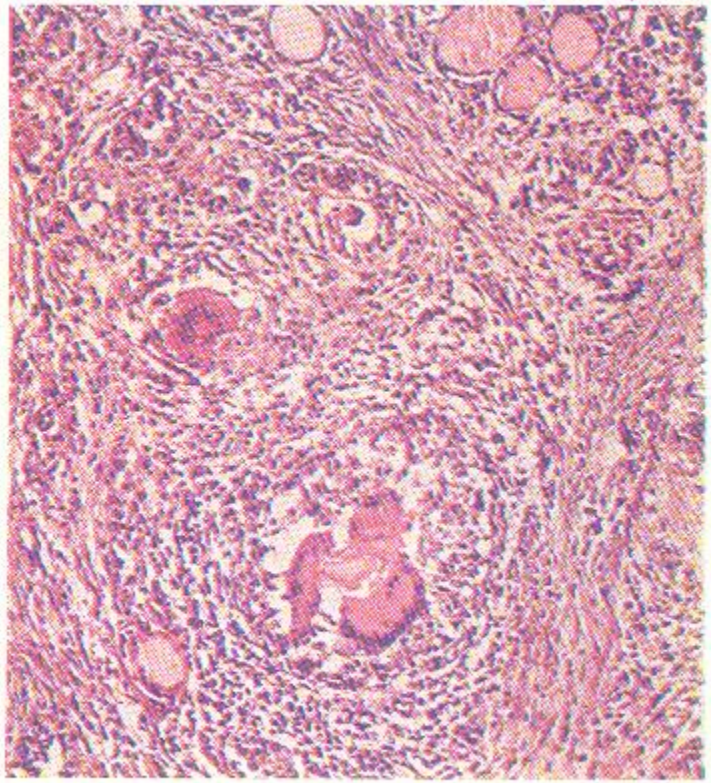
Rx Treatment :

- Thyroid extract 30 mg daily.
- **Indications for Surgery :**
  - Large gland failing to shrink after thyroid extract.
  - Cosmetic purpose
  - Persistence of pressure symptoms annoying sense of constriction.
  - To rule out carcinoma.

RIEDLES THYROIDITIS
Invasive, Fibrous thyroiditis

- Rare, 0.05% of all goiters
- **PATHOLOGY :**
  - Infiltratory infiltrate with dense fibrous tissue extending through capsule to adjacent structures.
  - Associated with retroperitoneal or mediastinal fibrosis,sclerosing cholangitis, and orbital pseudotumor .
  - Collagen disease.





PATHOLOGY :

Infiltratory infiltrate with dense fibrous tissue extending through capsule to adjacent structures.

Clinical Picture of Riedles Thyroiditis

- Mean age at presentation 47.8 years,
- 83 percent of all cases occur in females
- A stone hard or woody mass that extends from the thyroid is common
- Woody, hard thyroid, nodular,
- fixed pressure symptoms. Like dyspnea, dysphagia and, occasionally, stridor
- The thyroid mass may grow suddenly or slowly, and is usually unilateral

Investigations

- PBI, Radio iodine uptake within normal limits.
- RAIU is decreased in affected areas of the gland.
- Most patients remain euthyroid,
- ESR is frequently elevated
- Thyroid autoantibodies are present in appreciable quantities in 45 percent of patients

Diff. Diagnosis :
Anaplastic carcinoma

TREATMENT :

- Wedge biopsy
- Isthmus removed from free trachea.

- Indications of Surgery
  - Pressure symptoms
  - Cancer suspicious

TABLE 2 -- Clinical Manifestations of Thyroiditis Subtypes

Subtype	*Etiology*	*Neck pain*	*RAIU*	*TSH*	*T_4*	*Thyroid autoantibodies*
Chronic lymphocytic (Hashimoto's disease)	Autoimmune	No	Variable	Variable	Variable	Present
Subacute granulomatous	Viral	Yes	Decreased	Decreased	Increased	Absent
Subacute lymphocytic	Autoimmune	No	Decreased	Decreased	Increased	Present
Microbial inflammatory	Bacterial, fungal, parasitic	Yes	Variable	Normal	Normal	Absent
Hashitoxicosis	Autoimmune	No	Decreased	Decreased	Increased	Present
Invasive fibrous	Unknown	No	Variable	Normal	Normal	Variable

RAIU = radioactive iodine uptake; TSH = thyroid-stimulating hormone; T_4 = thyroxine.