



STATIC CASES

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Case 01

- A 66-year-old woman is brought to the emergency department because of fever, chills, night sweats, and progressive shortness of breath for 1 week. She also reports generalized fatigue and nausea. She has type 2 diabetes mellitus and hypothyroidism. Current medications include metformin, sitagliptin, and levothyroxine. She appears ill. Her temperature is 38.7° (101.7°F), pulse is 104/min, and blood pressure is 160/90 mm Hg.

Case 01

- Examination shows pale conjunctivae and small nontender hemorrhagic macules over her palms and soles. Crackles are heard at both lung bases. A grade 2/6 mid-diastolic murmur is heard best at the third left intercostal space and is accentuated by leaning forward. The spleen is palpated 1–2 cm below the left costal margin.

Case 01

- Laboratory studies show:
 - Hemoglobin 10.6 g/dL
 - Leukocyte count 18,300/mm³
 - Erythrocyte sedimentation rate 48 mm/h
 - Urine
 - Protein 1+
 - Blood 2+
 - RBCs 20-30/hpf
 - WBCs 0-2/hpf

Case 01



Case 01



Case 01

- What is the Dx ?
- Infective endocarditis
- What are these findings ?
- Splinter hemorrhages, Janeway lesions, Roth spots, Osler nodes
- What are the most common causes of Acute and subacute conditions?
- Acute IE: Staph aureus Subacute IE: Viridans streptococci
- How to diagnose this condition ?
- Modified Duke Criteria
- If the pt culture positive for S.bovis, what he should be screened for?
- Colon Cancer

Staphylococcus aureus (45–65%)	- Most common cause of acute IE in all groups (including IV drug users and patients with prosthetic valves or pacemakers/ICDs) - Affects previously healthy valves - Usually fatal within 6 weeks (if left untreated)
Viridans streptococci (30%): <i>S. sanguinis</i> , <i>S. mutans</i> , <i>S. mitis</i> 	- Most common cause of subacute IE, especially in predamaged native valves (mainly the mitral valve) - Common cause of IE following dental procedures - Produce dextrans that facilitate binding of fibrin-platelet aggregates on damaged heart valves
Staphylococcus epidermidis	- IE transmitted via infected peripheral venous catheters - Common cause of subacute IE in patients with prosthetic heart valves or pacemakers/ICDs ^{[1][2]}
Enterococci, especially <i>Enterococcus faecalis</i> (< 10%)	- Multiple drug resistance  - Common cause of IE following nosocomial urinary tract infections (UTIs)  - Following gastrointestinal or genitourinary procedures
<i>Streptococcus gallolyticus</i> (<i>S. bovis</i>) 	<i>S. gallolyticus</i> is associated with colorectal cancer. - If <i>S. gallolyticus</i> is detected, colonoscopy is indicated.
Gram-negative HACEK group (<i>Haemophilus species</i> , <i>Aggregatibacter actinomycetemcomitans</i> , <i>Cardiobacterium hominis</i> , <i>Eikenella corrodens</i> , <i>Kingella kingae</i>)	- Physiological oral pharyngeal flora (~ 3% of cases of IE) - In patients with poor dental hygiene and/or periodontal infection
<i>Candida species</i> <i>Aspergillus fumigatus</i>	- Causes IE in immunosuppressed patients (e.g., patients with HIV or organ transplantation) - Causes IE in IV drug abusers - Cause of IE after cardiosurgical interventions and/or long-term indwelling IV catheters

Case 01

Infective endocarditis – modified Duke criteria	
Diagnostic criteria for IE	Major criteria • Blood culture positive for typical microorganism (eg, <i>Streptococcus viridans</i>, <i>Staphylococcus aureus</i>, <i>Enterococcus</i>) • Echocardiogram showing valvular vegetation Minor criteria • Predisposing cardiac lesion • Intravenous drug use • Temperature >38 C • Embolic phenomena • Immunologic phenomena (eg, glomerulonephritis) • Positive blood culture not meeting above criteria Definite IE 2 major OR 1 major + 3 minor criteria Possible IE 1 major + 1 minor OR 3 minor criteria

Case 01

Vascular & immunologic manifestations of infective endocarditis	
Vascular phenomena	• Systemic emboli (cerebral, pulmonary, or splenic infarcts) • Mycotic aneurysm • Janeway lesions – Macular, erythematous, nontender lesions on the palms & soles
Immunologic phenomena	• Osler nodes – Painful, violaceous nodules seen on the fingertips & toes • Roth spots – Edematous & hemorrhagic lesions of the retina

Case 01

Classified by type of valve involved and clinical course			
	Native valve endocarditis		Prosthetic valve endocarditis
	Acute bacterial endocarditis	Subacute bacterial endocarditis	
Distinguishing clinical features	• Acute onset • Rapid, fulminant progression (days to weeks) • More severe <u>constitutional symptoms</u> (e.g., high fever)	• Insidious onset • Slow progression (weeks to months) • Less severe <u>constitutional symptoms</u> (e.g., low <u>fever</u> possible, often absent)	• Early-onset: ≤ 1 year after surgery • Late-onset: > 1 year after surgery
Main pathogens	• Most common: <i>S. aureus</i> (associated with large vegetations that can destroy the valves) • Others: group A <u>hemolytic streptococci</u>, <i>S.pneumoniae</i>, <i>N.gonorrhoeae</i>	• Most common: <u>viridans streptococci</u> species (small vegetations) • Others: nonenterococcal group D <u>streptococci</u> and <u>enterococci</u>	• Early-onset: <u>Coagulase-negative staphylococci</u>, <i>S. aureus</i>, or <u>gram-negative bacilli</u> (most common) [25] • Late-onset: <u>Coagulase-negative staphylococci</u>, <i>S. aureus</i>, <u>Viridans group streptococci</u> (most common) [25]
Affected valves	• Healthy native valves	• Native valves with prior injury or congenital defects	• <u>Mechanical valves</u> • <u>Bioprosthetic valves</u>

Case 02

- A 27-year-old woman comes to the physician because of increasing shortness of breath and a non-productive cough for 2 months. She has been unable to perform her daily activities. She has had malaise and bilateral ankle pain during this period. She noticed her symptoms after returning from a vacation to Arizona. She is a research assistant at the university geology laboratory. She is originally from Nigeria and visits her family there twice a year; her last trip was 3 months ago.

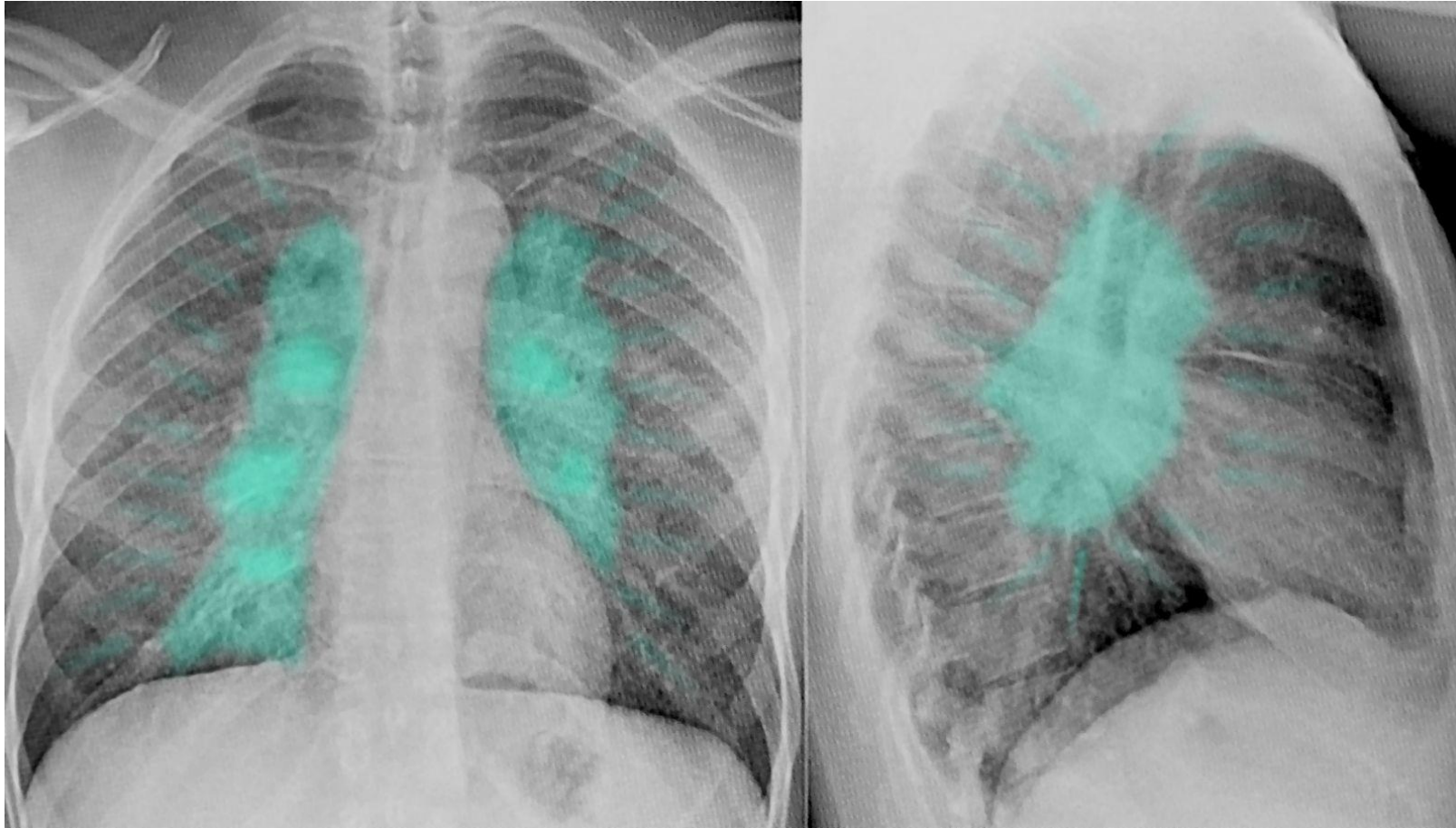
Case 02

- Her temperature is 37.8°C (100°F), pulse is 100/min, respirations are 24/min, and blood pressure is 112/72 mm Hg. Pulse oximetry on room air shows an oxygen saturation of 94%. There is no palpable cervical or axillary lymphadenopathy. The lungs are clear to auscultation. Her left eye is notable for ciliary injection and photophobia. The remainder of the examination shows no abnormalities. A complete blood count is within the reference range. An x-ray of the chest is shown.

Case 02



Case 02



Case 02



Case 02

- 1- what are the findings in the CXR?

bilateral hilar lymphadenopathy with a diffuse reticulonodular infiltrate.

Erythema nodosum

- 2- What is the most likely Dx?
- Sarcoidosis
- 3- What are the types of this disease ?
- Acute sarcoidosis (approx. $\frac{1}{3}$ of cases)
- Chronic sarcoidosis (approx. $\frac{2}{3}$ of cases)
- 4. How to stage the chronic variant?
- CXR

Acute Sarcoidosis

- Typically has a sudden onset and remits spontaneously within approx. 2 years
- Progression to chronic sarcoidosis is rare.
- General: fever, malaise, lack of appetite, weight loss
- Pulmonary: dyspnea, cough, chest pain
- Extrapulmonary: arthritis, anterior uveitis, erythema nodosum

Chronic Sarcoidosis

Chronic sarcoidosis

Etiology

Multisystem disorder with T cell dysfunction and noncaseating granuloma formation

Epidemiology

♀ > ♂; peak age: 20–40 years
More common in African American women.
More prevalent in Northern than Southern Europe

Serology

Typically negative for autoantibodies

Laboratory studies

Soluble interleukin-2 receptor
ACE
Bronchoalveolar lavage:
↑ CD4/CD8 ratio (often > 5)

Complications

Bronchiectasis, pulmonary fibrosis, chronic renal failure

Prognosis

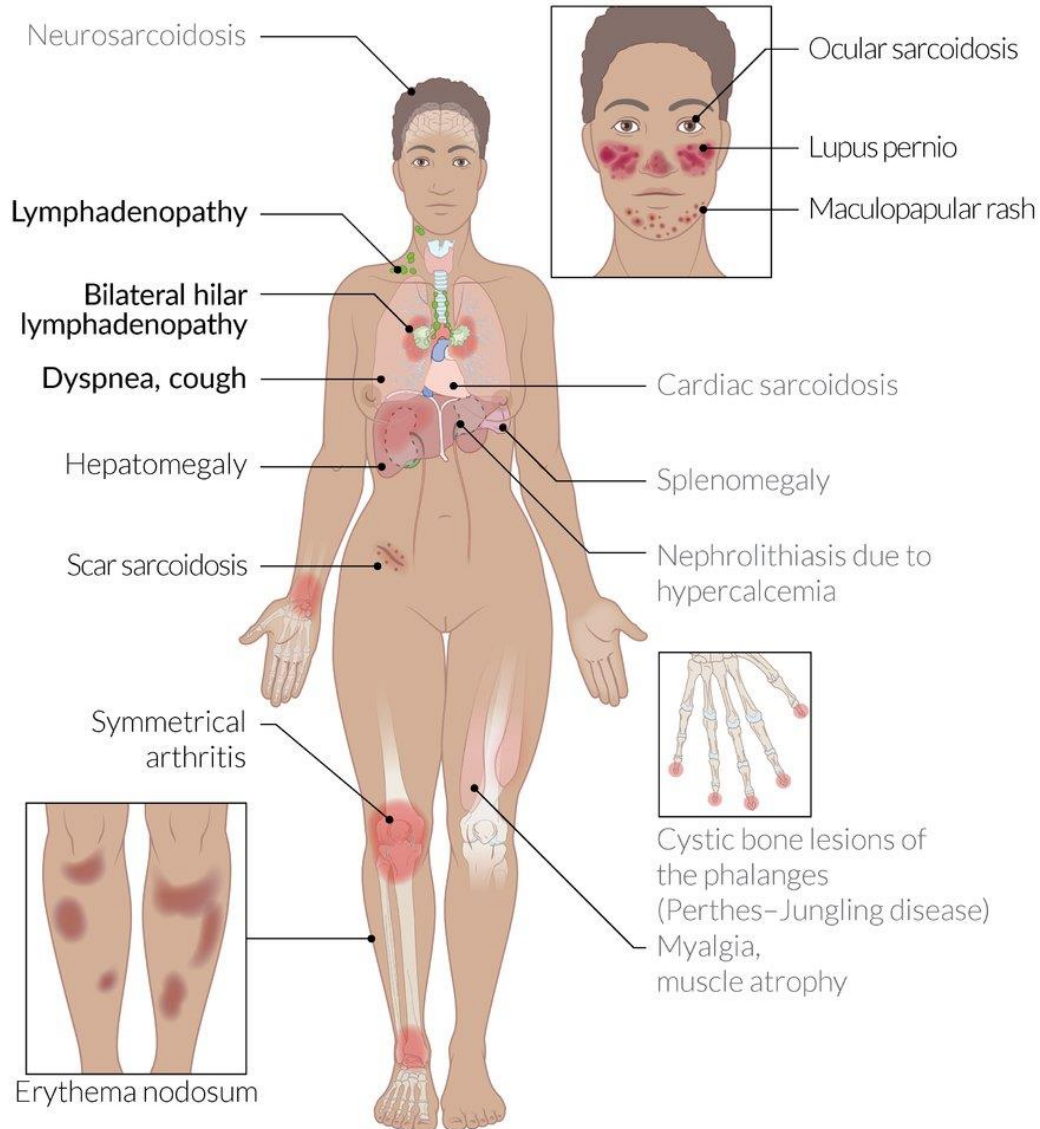
Spontaneous remission in 20%–70% of cases

General symptoms

Low-grade fever

Fatigue

Weight loss



Manifestations of sarcoidosis	
Pulmonary	• Bilateral hilar adenopathy • Interstitial infiltrates
Ophthalmologic	• Anterior uveitis (iridocyclitis or iritis) • Posterior uveitis
Reticuloendothelial	• Peripheral lymphadenopathy • Hepatomegaly • Splenomegaly
Musculoskeletal	• Acute polyarthritis (especially the ankle joints) • Chronic arthritis with periosteal bone resorption
Central nervous system/endocrine	• Central diabetes insipidus • Hypercalcemia
Lofgren syndrome	• Erythema nodosum • Hilar adenopathy • Migratory polyarthralgias • Fever

Lofgren syndrome

- Highly acute clinical presentation with fever and the following triad of symptoms
 1. Migratory polyarthrititis: symmetrical arthritis that primarily affects the ankles
 2. Erythema nodosum: primarily affects the extensor surface of the lower legs
 3. Bilateral hilar lymphadenopathy

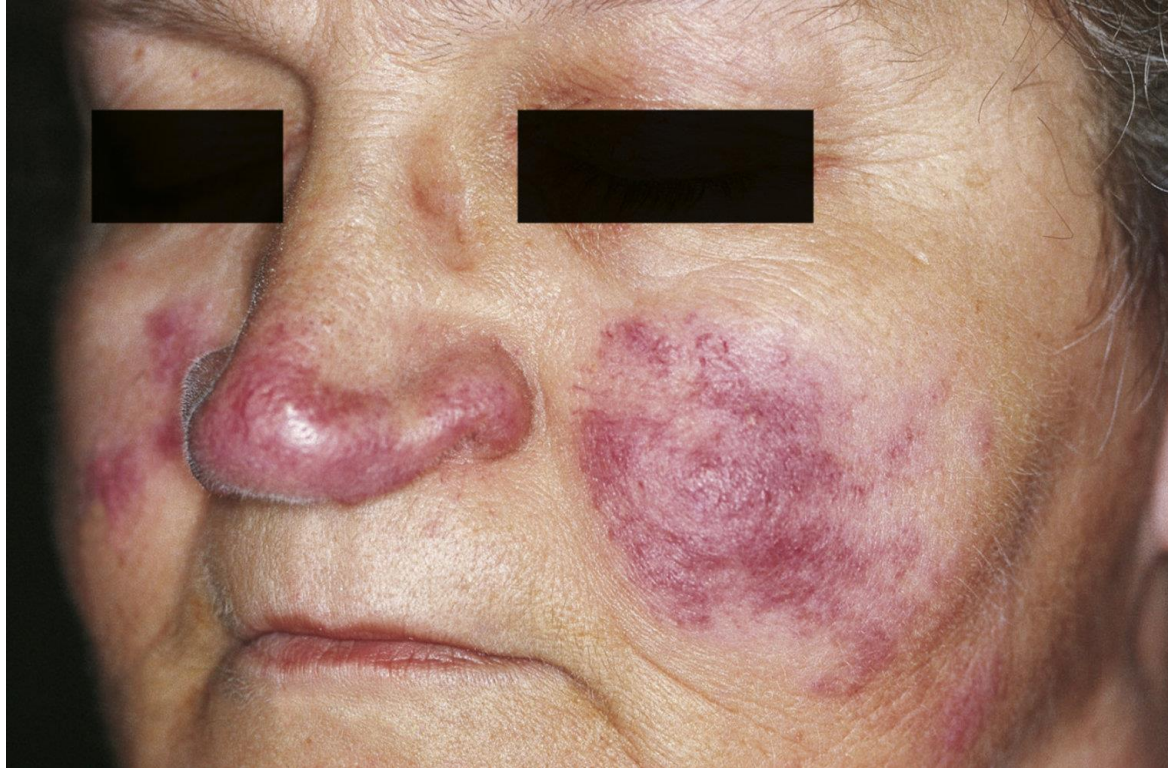
Heerfordt syndrome

- Chronic clinical presentation with fever and the following triad of symptoms
 1. Parotitis
 2. Uveitis (iridocyclitis)
 3. Facial palsy

Staging

Stages of chronic sarcoidosis	
Chronic sarcoidosis	Chest x-ray findings
Stage 0	• Normal findings ☰
Stage I	• <u>Bilateral hilar lymphadenopathy</u> (reversible)*
Stage II	• Bilateral reticular or <u>ground-glass opacities</u> with hilar <u>lymphadenopathy</u>; disseminated, reticulonodular infiltrates
Stage III	• Bilateral reticular or <u>ground-glass opacities</u> without hilar <u>lymphadenopathy</u>
Stage IV	• <u>Lung fibrosis</u> ☰

Cutaneous Manifestation



Lupus pernio

Cutaneous Manifestation



Scar sarcoidosis

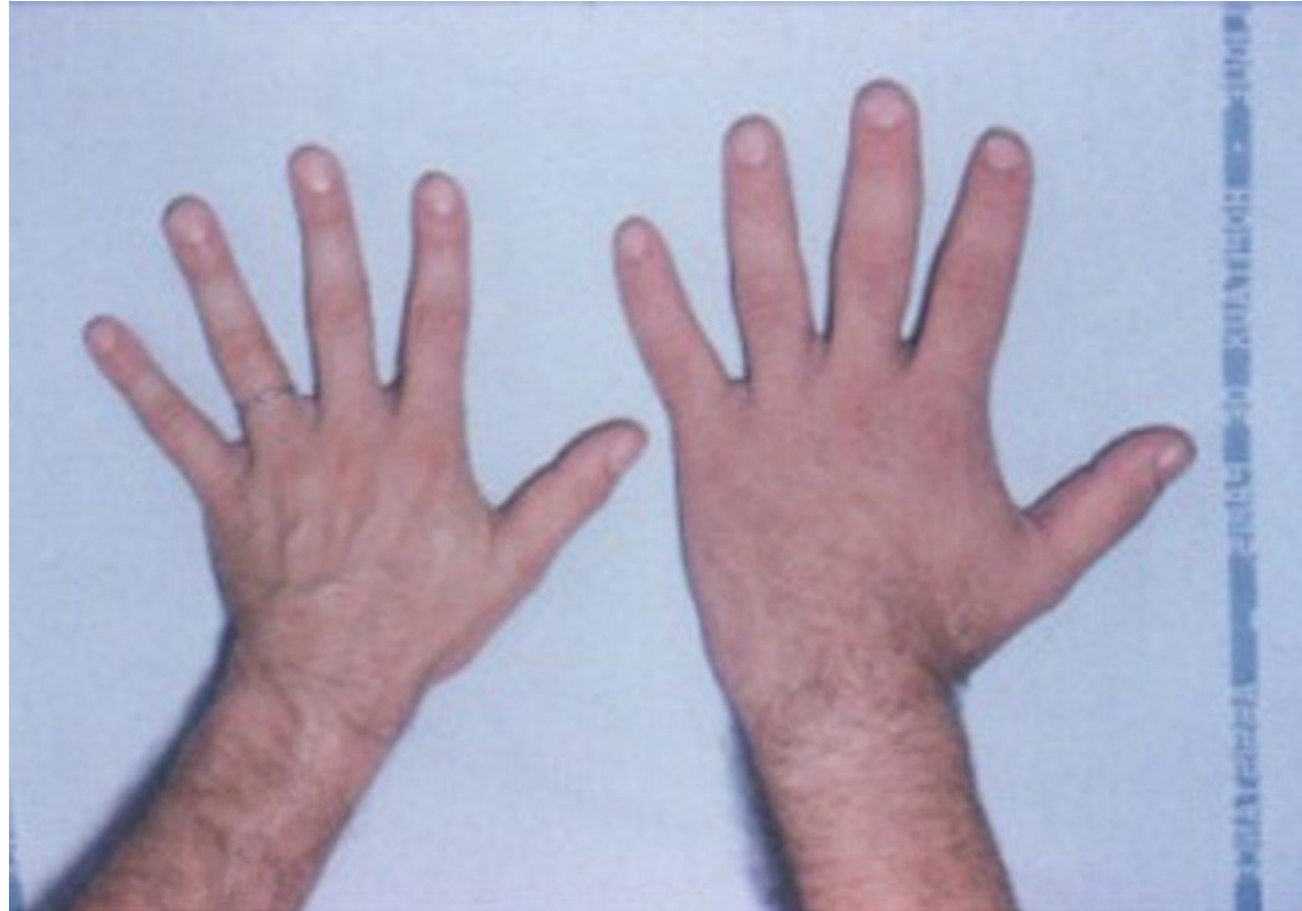
Case 03

- A 45-year-old man comes to the physician with his wife because he cannot climb more than 1 flight of stairs because of shortness of breath. For the past 2 months, he has intermittently had diffuse headaches, for which he has been taking over the counter acetaminophen. He does not take any other medications. His temperature is 37°C (98.6°F), pulse is 80/min, respirations are 24/min, and blood pressure is 145/90 mm Hg. Physical examination shows an enlarged tongue. His hands, fingers, and feet are widened and there is thickening of the skin folds

Case 03



Case 03



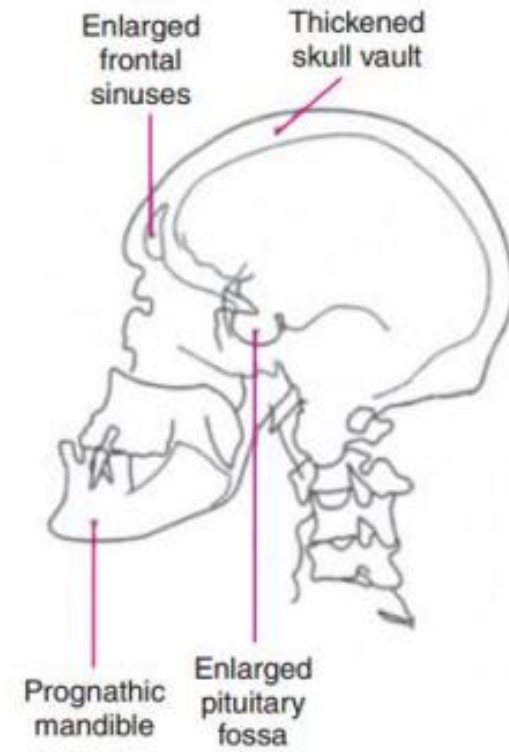
Case 03

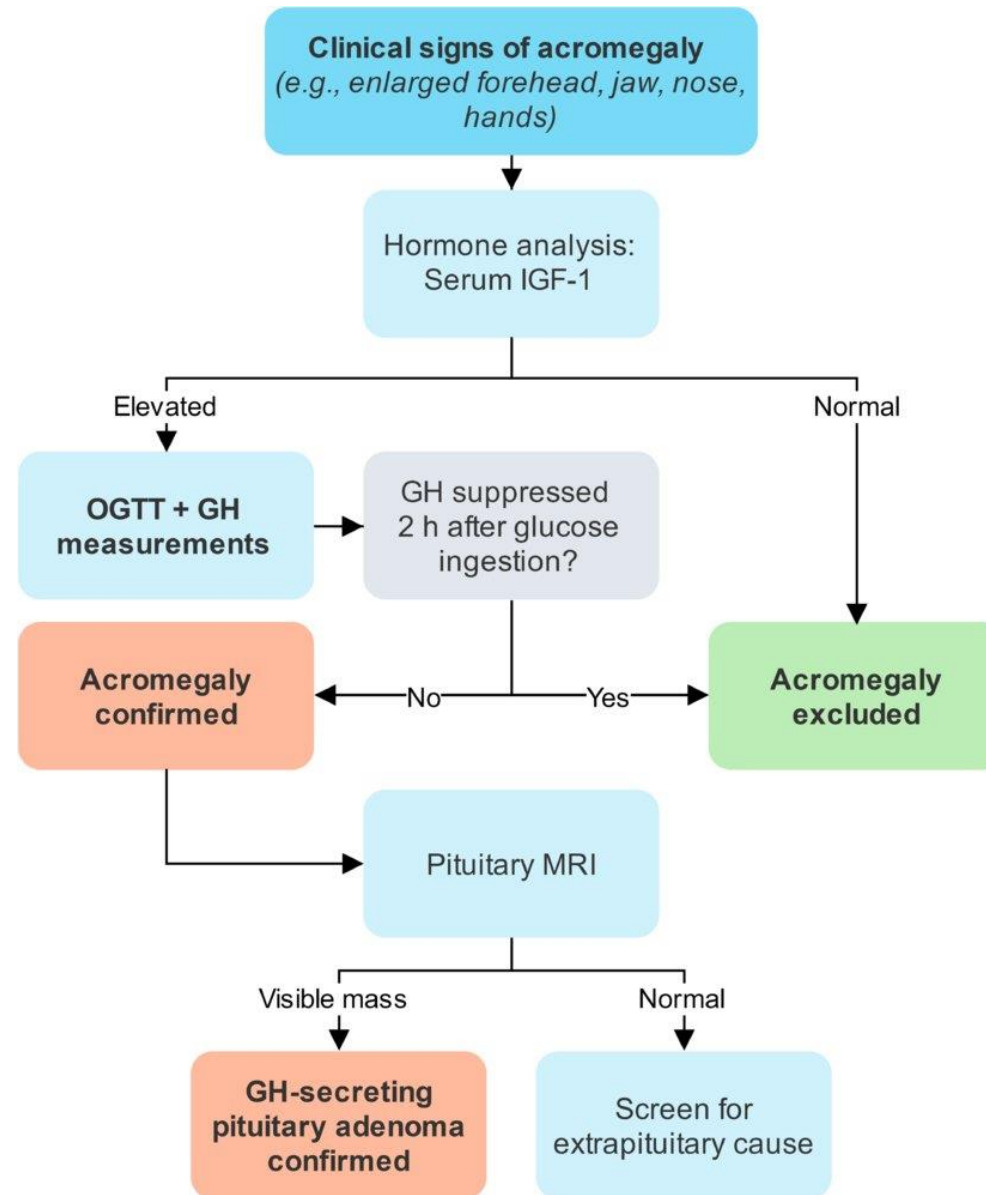
- 1- Describe this patient
 - Long face proganthesim prominent supraorbital ridges and spade like hands
- 2- what is the type of visual field loss occurs in this pt ?
 - bitemporal visual field loss
- 3- the best initial test for Dx ?
 - IGF-1 Concentration
- 4- the most accurate for Dx ?
 - Glucose tolerance test
- 5- what is the metabolic complication with percentage ?
 - Glucose intolerance 80 % DM 10-20 % HTN 30 %
- 6- The most common cause of death?
 - The most common cause of death in this patients is cardiovascular, accounting for approximately 40-60 % of deaths

Case 03

Common clinical features of untreated acromegaly	
Local tumor effect	Pituitary enlargement, visual field defects, headache, cranial nerve defects
Musculoskeletal/Skin	Gigantism, maloccluded jaw, arthralgias/arthritis, proximal myopathy, hyperhidrosis, skin tags, carpal tunnel syndrome
Cardiovascular	Cardiomyopathy, hypertension, heart failure, valvular disease (eg, mitral & aortic regurgitation)
Pulmonary / Gastrointestinal	Sleep apnea, narcolepsy, colon polyps/cancer, diverticulosis
Enlarged organs	Tongue, thyroid, salivary glands, liver, spleen, kidney, prostate
Endocrine	Galactorrhea, decreased libido, diabetes mellitus, hyperparathyroidism, hypertriglyceridemia

Case 03





Case 04

- A 38-year-old man comes to the physician because of worsening upper abdominal discomfort and lack of appetite for 2 weeks. He has had 3–4 episodes of vomiting during this period. Over the last year, he has had frequent episodes of abdominal pain at night that were relieved by eating. Endoscopic biopsy showing the following under microscope

Case 04

- What is the name of this bacteria ?

- **H.pylori**

- If a mucosal defect observed during endoscopy , what is the most common site where these defects are usually found ?

First part of duodenum

- Mention 3 complication for this disease ?

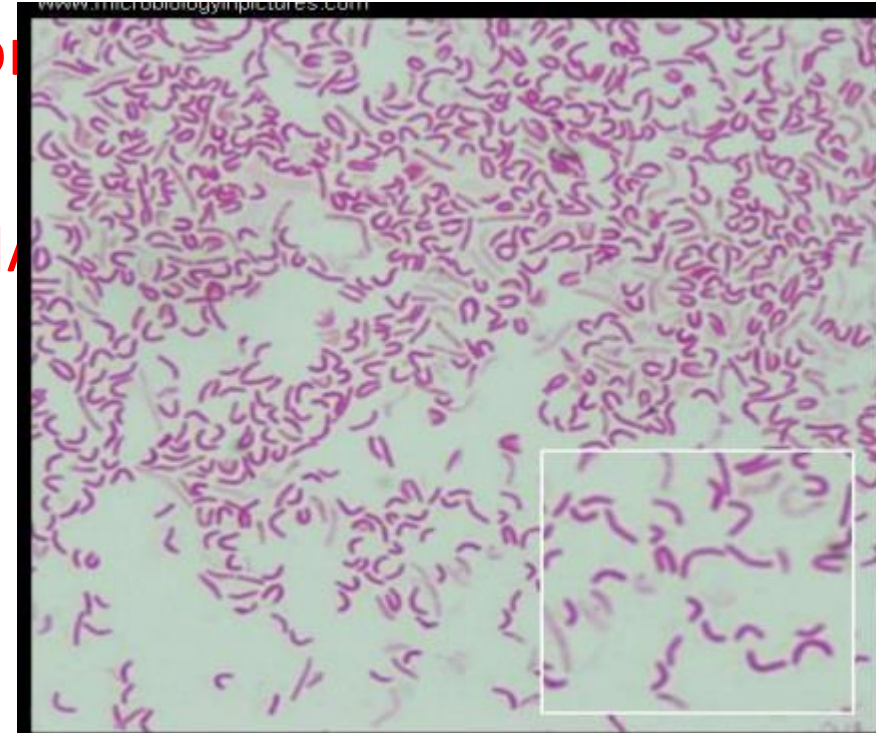
Hemorrhage , perforation , penetration , obstruction

- This bacteria increase the risk of which tumor ?

Mucosa associated lymphoid tissue lymphoma (MALT)

- What is the recommended eradication therapy for this disease ?

Triple or quadruple therapy



Case 04

Clinical symptoms of gastric and duodenal ulcers		
	Gastric ulcer	Duodenal ulcer
Findings common to both	• Dyspepsia: postprandial heaviness, early satiety, and gnawing, aching, or burning epigastric pain • Pain relief with antacids • Potential signs of internal bleeding (e.g., anemia, hematemesis, melena) • Stool sample positive for occult blood (see "Diagnostics" in "Gastrointestinal bleeding")	
<u>Pain and eating</u>	• Pain increases shortly after eating → weight loss 📄	• Pain is relieved with food intake → weight gain 📄 • Pain increases 2–5 hours after eating. [16]
<u>Nocturnal pain</u>	• Less common [17]	• More common [17]

Case 04

Diagnostic approach for suspected PUD [22]		
	Patient group	Testing strategy
Initial evaluation	All patients	- Screen for common etiologies on history, e.g., NSAID use (see "Etiology") - Consider the following if there is suspicion for occult bleeding: - CBC and BMP - Fecal occult blood test
	Patients $\leq$ 60 years of age without red flags for dyspepsia	- Begin with noninvasive testing for <i>H. pylori</i> infection (<i>H. pylori</i> test-and-treat strategy). - Urea breath test <i>H. pylori</i> stool antigen test
	- Patients $>$ 60 years of age, or $>$ 45 years of age in areas with high gastric cancer prevalence - Patients with red flags for dyspepsia: on a case-by-case basis [22] - Patients unresponsive to empiric medical therapy (e.g., <i>H. pylori</i> eradication therapy, PPI trial therapy)	Refer directly for EGD (or other indicated diagnostic study, e.g., liver chemistries and abdominal ultrasound for jaundice).
Further evaluation	All patients with persistently uncertain etiology	Consider specialized laboratory studies (e.g., secretin stimulation test for gastrinoma).

Red Flags

- Age greater than 55 with new onset dyspepsia
- Dysphagia
- Unintentional Wt loss
- GI bleeding
- Persistent vomiting
- IDA
- Palpable epigastric mass
- Abnormal Ba meal