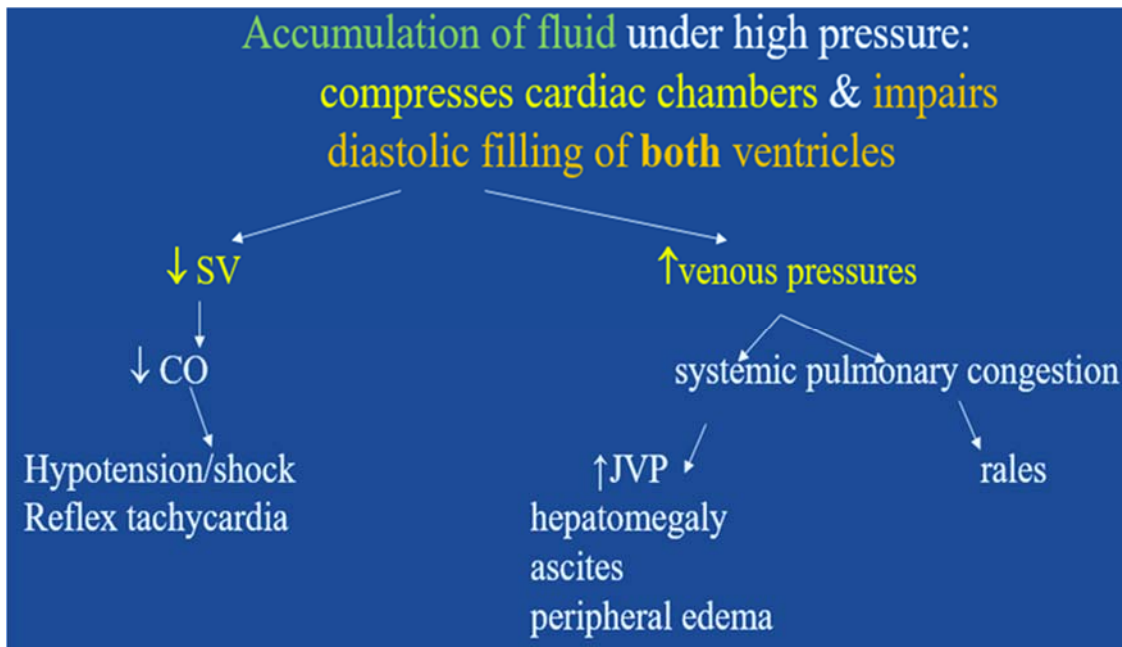


**21) Describe the Pathophysiology of Cardiac Tamponade**



**22) Define and Describe the Rheumatic Fever**

- Rheumatic fever is an acute, immunologically mediated, multisystem inflammatory disease.
- It occurs 3–4 weeks following an episode of pharyngitis due to A beta hemolytic streptococci: *Streptococcus pyogenes* serotype M.
- RF is thought to complicate up to 3 % of untreated streptococcal sore throats
- Rheumatic fever principally involves the systemic connective tissue; **heart, joints, skin, subcutaneous and vascular connective tissue**

### 23) Describe the Unstable angina (UA):

- Angina that *occurs at rest*.
- It lies *between stable angina* on the one hand and *myocardial infarction* on the other. Also referred to as “pre-infarct” angina
- Ischemia caused by dynamic obstruction of a coronary artery due to ruptured atherosclerotic plaque with superimposed thrombosis and spasm
- In UA, chest pains occur with increased frequency.
- The symptoms are not relieved by rest or nitroglycerin.

### 24) Define Cor pulmonale and causes.

- Cor pulmonale refers to the *altered structure* (eg, **hypertrophy or dilatation**) and/or **impaired function of the right ventricle** that results from pulmonary hypertension (High blood pressure in the arteries of the lungs)
- Any chronic lung condition that *causes prolonged hypoxia* (low blood oxygen levels) may lead to pulmonary hypertension and possibly to cor pulmonale.
- Causes : COPD , acute pulmonary embolism, Cystic fibrosis

### 25) Describe the pulmonary edema.

- *Left ventricle is unable to pump out all of the blood* that it receives from the lungs (through the **pulmonary veins to left atrium**) into the *systemic circulation* (**through the aorta**)
- Resulting in blood accumulation in the pulmonary veins and capillaries,
- Leading to a **dangerous rise in the pressure of the pulmonary veins & capillaries**.
- This causes fluid to be pushed through the capillary walls and into the alveoli
- *Lungs become congested with blood causing pulmonary edema*.

### 26) Describe Hashimoto’s thyroiditis

- It is the most common primary disorder (95%) of **acquired Hypothyroidism**
- **An autoimmune disorder** in which the thyroid gland *may be totally destroyed by an immunologic process of unknown cause*.
- It is the *major cause of goiter and hypothyroidism in children and adolescents*.
- It is a disease of women, with a female-to-male ratio of 10:1 to 20:1.
- Other features of this disease are Antibodies against TPO (enzyme **thyroid peroxidase** ) & thyroglobulin

## 27) Define and describe the pathophysiology of Graves' disease

- Graves' disease is a state of :***Hyperthyroidism, Goiter, and Ophthalmopathy (exophthalmos***, i.e., bulging of the eyeballs)
- The onset usually is between the ages of ***20 and 40 years***,
- ***Women are five times more*** likely to experience the disease ***than men***.
- Graves' disease is an ***autoimmune disorder*** characterized by abnormal stimulation of the thyroid gland by ***thyroid-stimulating antibodies (thyroid-stimulating immunoglobulins -TSI's-)*** of the ***IgG*** class are produced and bind to ***TSH receptors*** on the thyroid gland.
- The ***TSI's*** mimic the ***action of TSH*** and ***cause: Excess secretion of thyroxine (T4) & triiodothyronine (T3)***.

## 28) Describe the Corticosteroids withdrawal syndrome

- ***Steroid withdrawal syndrome***, or rebound effect is ***the body's exaggerated response to removal of the drug***.
- It can occur if corticosteroid drugs ***are not discontinued gradually***.
- ***Tapering (تخفيض تدريجيا)*** ***the drug*** gives the ***adrenal glands time to return to their normal patterns of secretion*** and thus minimizes corticosteroid withdrawal symptoms.
- Withdrawal symptoms are: (***weakness, fatigue, decreased appetite, weight loss, nausea, vomiting, diarrhea, abdominal pain***) can mimic many other medical problems.
- Another possible complication to stopping steroids too quickly can result in ***adrenal crisis*** (a life-threatening state caused by insufficient levels of cortisol).

## 29) Explain the pathophysiology of Cushing's syndrome & disease

- ❖ **Cushing's syndrome** refers to ***excess cortisol of any etiology***.
  - From cortisol secreting ***adenoma*** in the ***cortex of the adrenal gland***
  - The adenoma causes ***cortisol levels in the blood to be very high***, and negative feedback on the pituitary from the high cortisol levels causes ***ACTH levels to be very low***.
- ❖ **Cushing's disease** refers only to ***high cortisol levels*** secondary to excess production of ACTH from a ***pituitary gland adenoma***.
  - This causes the blood ***ACTH levels to be elevated*** along with cortisol from the adrenal gland.

30) Explain the pathophysiology of Systemic Lupus Erythematosus (SLE)

- SLE is a multisystem autoimmune disease characterized by the **production of antibodies to components of the cell nucleus** in association with a *diverse array of clinical manifestations*.
- It is caused by **tissue damage** *resulting from* antibody and complement fixing immune complex deposition.
- The *immune complexes* that are formed build up in the tissue causing **inflammation, injury to the tissue, and pain**.
- SLE can affect any part of the body, but most often harms the *heart, joints, skin, lungs, blood vessels, liver, kidneys and nervous system*.

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