NOTES
CARDIAC TUMORS

GENERALLY, WHAT ARE THEY?

PATHOLOGY & CAUSES

- Abnormal cell growth forms mass in heart

TYPES

Primary

- Rare
  - *Adults:* myxoma
  - *Children:* rhabdomyoma

Secondary

- More common than primary
- Metastases from cancer in other areas (lung cancer, lymphoma, breast cancer, leukemia, melanoma, hepatocellular carcinoma, colon cancer)
  - Lymphogenous/hematogenous dissemination

COMPLICATIONS

- Impaired left ventricular structure, filling, ejection caused by tumor
- Arrhythmias: tumor disrupts normal nodal/septal electrical conduction
- Heart failure: tumor obstructs inflow/outflow
- Recurrence of tumor after excision (if tumor not completely removed)
- Embolism, sudden cardiac death, myocardial infarction

SIGNS & SYMPTOMS

- Asymptomatic
  - Incidental finding on echocardiogram, MRI, CT scan
- Dyspnea
  - Most common symptom
  - Can progress to orthopnea, paroxysmal nocturnal dyspnea
- "Tumor plop" sound upon auscultation with left atrial myxoma
- Syncope, presyncope, dizziness, chest pain/tightness

DIAGNOSIS

DIAGNOSTIC IMAGING

- MRI, CT scan, ultrasound
  - Incidental finding
  - See individual disorders
- 2D echocardiogram preferred procedure

LAB RESULTS

- Histology conducted on biopsy via surgical excision/fine needle aspiration

TREATMENT

SURGERY

- *Symptomatic:* surgical resection

OTHER INTERVENTIONS

- *Asymptomatic:* monitor

ATRIAL MYXOMA

osms.it/atrial-myxoma

PATHOLOGY & CAUSES

- A benign heart tumor
- Most common primary cardiac tumor in adults
- Arises in heart's mesenchymal connective tissue
- Most common in left atrium, may cause syncope
  - Tumor in left atrium → obstructs mitral valve
- Histology
  - Pedunculated (attached to tissue stalk)
  - Gelatinous due to abundance of ground substance

RISK FACTORS

- Age 40–60
- More common in biological females
  - Less pronounced in familial atrial myxoma
- Genetic disease

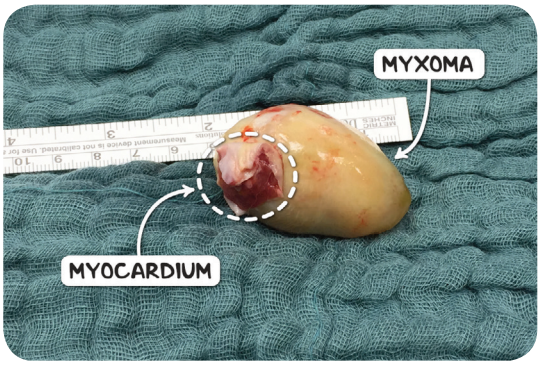

Figure 5.1 Surgically excised atrial myxoma. A small piece of myocardium marks the point of attachment.

SIGNS & SYMPTOMS

- *Asymptomatic:* incidental finding on echocardiogram, MRI, CT scan
- *Dyspnea:* most common symptom
  - Can progress to orthopnea, paroxysmal nocturnal dyspnea
- "Tumor plop" sound upon auscultation with left atrial myxoma
- Syncope, presyncope, dizziness, chest pain/tightness

DIAGNOSIS

LAB RESULTS

Histology

- Stellate myxoma cells in myxoid stroma of glycosaminoglycans

TREATMENT

SURGERY

- *Symptomatic:* resection

OTHER INTERVENTIONS

- *Asymptomatic:* monitor

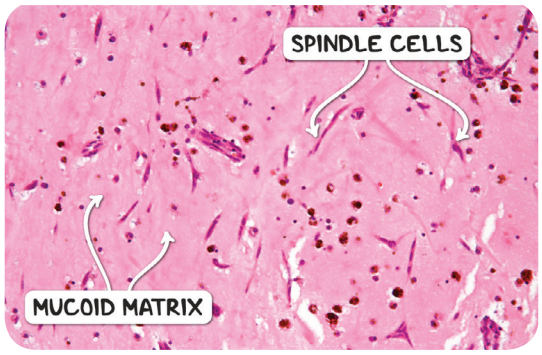

Figure 5.2 Histological appearance of a myxoma with abundant mucoid matrix (pink background) and scanty, bland spindle cells with low mitotic activity.

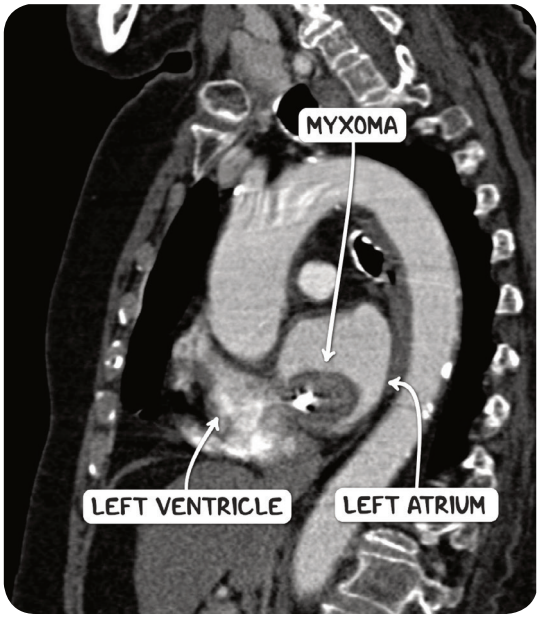

Figure 5.3 A sagittal CT scan demonstrating a myxoma in the left atrium.

RHABDOMYOMA

osms.it/rhabdomyoma

PATHOLOGY & CAUSES

- Benign tumor of striated muscle
- Most common primary cardiac tumor in infants/children
- Arises in ventricles
- Presents congenitally
- Benign hamartoma (abnormal tissue formation)
- Association between rhabdomyoma/tuberous sclerosis about 30–50%
- Often regresses spontaneously
- Shrink with age

RISK FACTORS

- More common in children
- More common in biological males (2.4:1 male-female ratio)
- Average presentation age is four years old
- Associated with nevoid basal cell carcinoma syndrome
- Genetic disease

DIAGNOSIS

DIAGNOSTIC IMAGING

MRI, CT scan, ultrasound

- Incidental finding

Ultrasound, MRI

- Visualize tumor

LAB RESULTS

Histology

- Hamartomatous growths surrounded in a glycogen-rich eosinophilic cytoplasm

SIGNS & SYMPTOMS

- Usually present at birth
- Tender, painful, benign, slow-growing nodules
  - Common in neck/mouth/larynx, may cause breathing difficulties

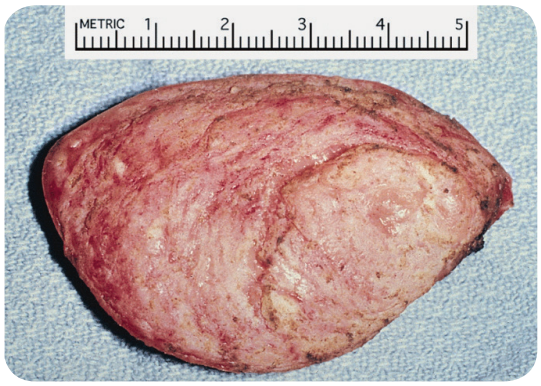

Figure 5.4 A surgically excised rhabdomyoma.

TREATMENT

SURGERY

- *Symptomatic:* surgical resection

OTHER INTERVENTIONS

- *Asymptomatic:* monitor

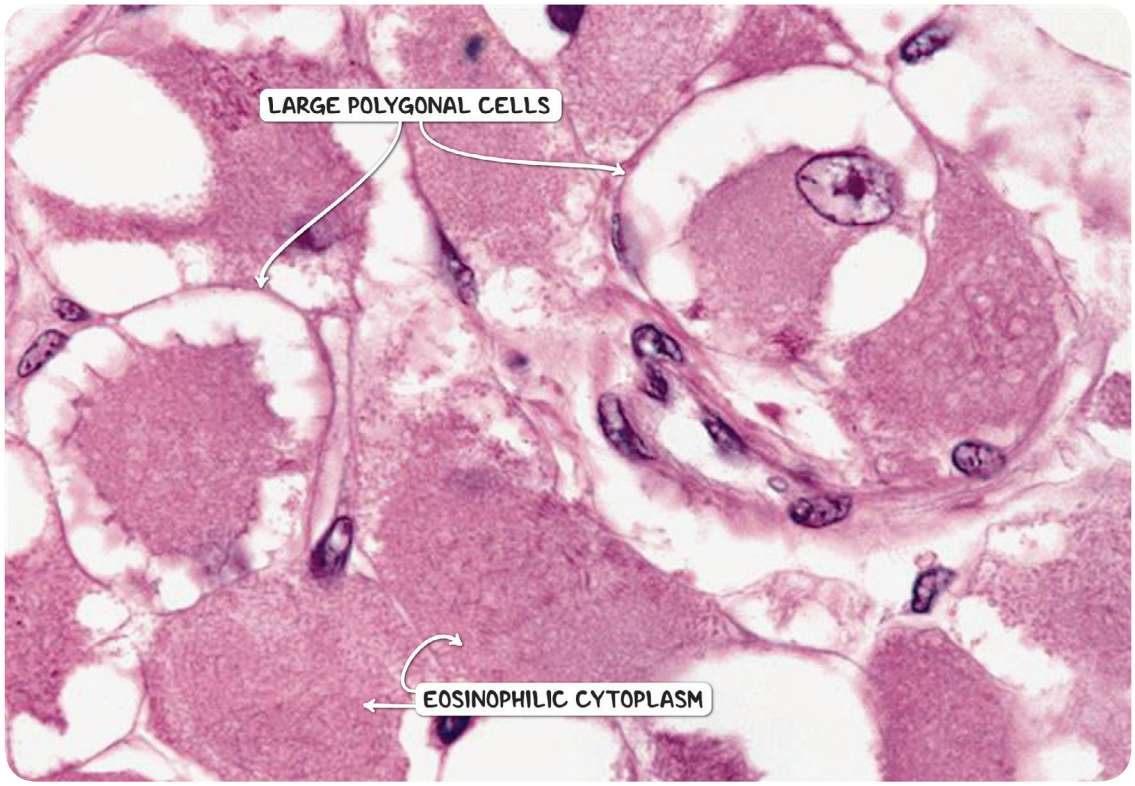

Figure 5.5 Histological appearance of a rhabdomyoma composed of plump, pink skeletal muscle cells.