Conditions Associated with Chronic Illness
Introduction

• Additional diagnoses will be loaded into the tablet. This presentation reviews three that may be unfamiliar:
  • Secondary Hypercoagulability in Atrial Fibrillation
  • Secondary Hyperaldosteronism
  • Secondary Hyperparathyroidism
Introduction

• There are several conditions that can be clinically inferred and documented based on the presence of other chronic illnesses and in some cases the use of certain medications.
• These conditions include:
  • Secondary Hypercoagulability in Atrial Fibrillation
  • Secondary Hyperaldosteronism due to CHF or Cirrhosis
  • Secondary Hyperparathyroidism in CKD
    • GFR < 45
  • New diagnoses will be loaded to the tablet based on updated logic.
  • For reference Job Aids associated with this course, click on Attachments on the upper right side.
Secondary Hypercoagulability

• If a member has atrial fibrillation (afib) and is being treated with warfarin, dabigatran, rivaroxaban, or apixaban, the member likely has Secondary Hypercoagulability and should therefore be documented.
Secondary Hypercoagulability in Atrial Fibrillation

• Atrial Fibrillation causes a secondary hypercoagulable state which may be treated by warfarin, dabigatran, rivaroxaban, or apixaban.
• This diagnosis applies to patients with afib and a CHADS₂-VASc high enough to require warfarin. According to the CHADS₂-VASc, Warfarin is indicated in most patients age 65-74 or in most patients with comorbidities including hypertension, congestive heart failure, diabetes, prior history stroke/TIA, or vascular disease. It is not necessary to calculate the CHADS₂-VASc in every patient and clinical judgment is important in decision making.
  • Always use clinical judgment when selecting diagnoses.
• The CHADS₂-VASc score predicts the rate of stroke and is a measure of coagulability and vascular disease. Patients with a score of 2 or more are at higher risk for stroke.
• The following is a link to a CHADS₂-VASc score calculator: http://www.mdcalc.com/cha2ds2-vasc-score-for-atrial-fibrillation-stroke-risk/
Secondary Hypercoagulability in Atrial Fibrillation

• Patients with a fib and who are at risk of stroke are treated with anticoagulants due to the secondary hypercoagulability attributed to the arrhythmia.

• Appropriate documentation may include:
  – Atrial Fibrillation with Secondary Hypercoaguable state from underlying disease and comorbidities –
    – Assessment: stable, suboptimal controlled or unstable depending on INR results if available
  – Plan: continue to follow up with PCP, follow up with specialist, monitor INR.
Secondary Hyperaldosteronism

• If a member is noted with cirrhosis or CHF and there is significant edema, Secondary Hyperaldosteronism can be documented.

• In fact this is why spironolactone is indicated for treatment of stage D, class III-IV HF patients. In this edematous state patients are considered to have Secondary Hyperaldosteronism.
Secondary Hyperaldosteronism

- Primary Hyperaldosteronism usually occurs from adrenal hyperplasia.
- Secondary Hyperaldosteronism:
  - Increased aldosterone production in response to elevated renin secretion. Any pathology that results in compromised blood flow to kidneys such as CHF or cirrhosis can increase renin secretion and thus aldosterone secretion.
  
- Excessive production of aldosterone caused by an extra-adrenal disorder, such as heart failure, kidney disease, cirrhosis, or hypoproteinemia.
Secondary Hyperaldosteronism

- A growing body of evidence relates the excess of aldosterone to the development and progression of cardiovascular and renal disease.
  - Aldosterone is involved in an independent manner in the development and progression of arterial hypertension, congestive heart failure, chronic kidney disease, coronary artery disease, and stroke.
- Aldosterone increases tissue angiotensin-converting enzyme and up regulates angiotensin receptors,
  - Suggesting the potential for a vicious cycle in which angiotensin II potentiates aldosterone secretion, which, in turn, leads to an increase in angiotensin II generation and, therefore, to an additional increase in aldosterone.
Hyperparathyroidism

Consider hyperparathyroidism if one or more of the following are present:

• PTH is greater than 65
• Medications for hyperparathyroidism are present
  – Hectoral
  – Sensipar
  – Zemplar
• Abnormal calcium
  – ionized calcium > 5.6 mg/dl
  – serum calcium > 10.5 mg/dl
Hyperparathyroidism

- The hyperparathyroid glands regulate calcium in the blood and bones.
- Hyperparathyroidism occurs when the parathyroid glands secrete too much parathyroid hormone (PTH).
- The hypersecretion of the PTH causes bone resorption causing weakening of the bones and an increase of calcium in the blood.
Secondary Hyperparathyroidism

- Secondary hyperparathyroidism occurs when the parathyroid gland appropriately responds to a reduced level of extracellular calcium.
- PTH concentrations rise, and calcium is mobilized by increasing intestinal absorption (via increase in calcitriol) and by increasing bone resorption.
- Thus, it is characterized biochemically by elevated PTH and normal or low serum calcium concentrations.
Hyperparathyroid Disease

• Secondary hyperparathyroidism may occur in patients with renal failure and impaired calcitriol (1,25 dihydroxyvitamin D) production, as well those with inadequate calcium intake or absorption, as can occur with vitamin D deficiency or with gastrointestinal diseases causing malabsorption.

• Assessment of renal function (serum creatinine), vitamin D status (25-hydroxyvitamin D, 25OHD), and calcium sufficiency (urinary calcium excretion) may help differentiate normocalcemic primary and secondary hyperparathyroidism.

• Further assessment and work-up for specific gastrointestinal disorders is generally undertaken only when the clinical suspicion is high.
Hyperparathyroid Disease

Asymptomatic or mild:
• Fatigue/ need for sleep
• Muscle weakness
• Aches/ pains in bones/joints
• Feeling depressed
Laboratory Values

In patient with GFR < 45, check:

- PTH
- Vitamin D
- Phosphorus
- Calcium
Possible Abnormal Results

- If PTH is elevated and Vitamin D, Calcium, and Phosphate levels are normal, document secondary hyperparathyroidism

- If PTH and Phosphate are elevated and Vitamin D and Calcium are normal, document secondary hyperparathyroidism

- If PTH is elevated, Vitamin D is low, and Calcium and Phosphate are normal, document unspecified hyperparathyroidism
For questions contact your manager.

To close out of this training, click on the X on the upper right side.