Etools / apps for the curious

Geoffrey C Zarrella DO FACC
Nejm image challenge

Treatment with which antihypertensive is most likely to cause this appearance?

- Beta-blocker
- Diuretic
- Alpha-blocker
- Angiotensin converting-enzyme inhibitor
- Calcium-channel blocker

How others chose
Treatment with which antihypertensive is most likely to cause this appearance?

Correct!
Angioedema of the tongue is most associated with treatment with an angiotensin converting-enzyme inhibitor.

How others chose
What accounts for this patient's hand pain?

Correct!
Peripheral ischemia resulted from interruption of radial artery blood flow at the wrist by a thrombosis.

Ulnar artery occlusion
Wrist fracture
Radial artery thrombosis
Carpal tunnel syndrome
Reflex sympathetic dystrophy

49047 total responses

How others chose
What Is the Diagnosis?

A. Carcinoma of the cecum
B. Ileocecal intussusception
C. Intussusception of the appendix
D. Diverticulum of the cecum

What Would You Do Next?

A. Obtain a radiograph of the lower leg
B. Obtain antinuclear antibody levels
C. Perform a punch biopsy of the lesion

Obtain blood cultures and prescribe...
What Would You Do Next?

A. Obtain a radiograph of the lower leg

B. Obtain antinuclear antibody levels

C. Perform a punch biopsy of the lesion

D. Obtain blood cultures and prescribe empirical antibiotics

---

classic appearance of a sharply demarcated reddish-brown plaque with central yellow deposits on the pretibial regions. Lesions of necrobiosis lipoidica may slowly develop ulcerations, telangiectasias, and an atrophic appearance. The evolution of this patient's lesion over years and the lack of systemic symptoms limit the utility of blood cultures, radiography, and antinuclear antibody levels. A punch biopsy was performed to confirm the diagnosis and revealed the characteristic layered appearance produced by tiers of inflammatory dermal infiltrate arranged parallel to an atrophic epidermis (Figure 2). Dermal necrobiosis (Figure 2) and a mixed
Figure 1 - Medical Cases for Healthcare Profession...
Figure 1, Inc.

Description

CTKBearts
Physician Assistant Student

transplanted heart restarted and beating at 100 BPM. So far so good! You can see the aortic arch stitch and the white wires are pacing leads.
Answered by creedmoor

ERMedX6
Emergency Medicine Resident

patient presented with extreme abdominal #Distention and had severe impaction. Why would the stomach fill up with air like this?? I was completely taken aback by this.

orangekp
Medical Student

34 yo female Laotian patient admitted in cardiology unit for discrete lower-limb edema for 3 months. Left shoulder moves as the heart beats. Important systolic murmur prominent at the tricuspid area. History of Ebstein's anomaly as seen in pictures. Pt refused heart transplantation and left.
A #bezoar from a four year old girl with severe trichotillomania and subsequent severe anemia.
GoodRx

Find the lowest local prices for your prescriptions
CHERRY HILL

Top 20 Drugs

1. Lipitor (atorvastatin)
2. Cialis
3. Ambien (zolpidem)
4. Xanax (alprazolam)
5. Neurontin (gabapentin)
6. Prilosec (omeprazole)
7. Synthroid
8. Lexapro (escitalopram)
9. Cozaar (losartan)

Browse by Health Condition

Recent Price Searches
Start by typing the "imprint" on your pill.

The imprint is the text that is printed on a pill or capsule to help identify it.
What is Acromegaly?

Acromegaly is a condition in which the pituitary gland produces too much growth hormone in adults. High levels of growth hormones can result in enlargement of hands, feet, and lips; thickening of the skin; swelling of internal organs; thickening of vocal chords, resulting in a deeper voice; expansion of the skull; pronounced brow and jaw protrusion; wide gaps between teeth; and carpal tunnel syndrome.

Common Treatment Forms

Ergot Derivatives
8 drugs

Somatostatin Analogues
4 drugs

Growth Hormone Receptor Antagonists
1 drug
Welcome to ACC's Statin Intolerance Tool

This tool should be used by clinicians to assess, treat, and manage patients with possible statin intolerance.

Although muscle symptoms may occur, true statin intolerance is uncommon. Given the benefits of statins in ASCVD risk reduction, clinicians should partner with the patient to gain a thorough symptom history and determine if he or she is truly statin intolerant. Walk through the steps of treating and managing a patient who reports muscle symptoms, including cycles of statin discontinuation and rechallenge to identify a tolerated statin and dose:

1. Evaluate
   Evaluate possible intolerance to patient’s current statin prescription.

2. Follow-Up
   Follow steps to treat and manage possible statin-related muscle symptoms.

3. Drug Compare
   Compare statin characteristics and drug interactions to determine the best cholesterol-lowering therapy.

Reset All Data

Resources  Disclaimer  About
Likelihood of Statin-Related Muscle Symptoms with Current Prescription

Statin: Rosuvastatin (Crestor®)

<table>
<thead>
<tr>
<th>Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptom timing allows for statin</td>
<td>Y</td>
</tr>
<tr>
<td>intolerance</td>
<td>Y</td>
</tr>
<tr>
<td>Symptom Type</td>
<td>Muscle ache, Weakness, Soreness, Stiffness,</td>
</tr>
<tr>
<td></td>
<td>Cramping, Tenderness, General Fatigue</td>
</tr>
<tr>
<td>Symptom Location</td>
<td>Unilateral</td>
</tr>
<tr>
<td>Sex</td>
<td>Male</td>
</tr>
<tr>
<td>Age</td>
<td>40-74</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>White</td>
</tr>
<tr>
<td>CK Elevated &gt; 5x ULNP</td>
<td>Don't know</td>
</tr>
<tr>
<td>Risk Factors for Statin Symptoms</td>
<td>Identified / 1</td>
</tr>
<tr>
<td>Non-Statin Causes</td>
<td>Identified / 2</td>
</tr>
</tbody>
</table>

Next Steps
1. Consider suspending statins until symptoms resolve.
2. Conduct any labs needed to establish risk factors or secondary causes.
3. Check for rhabdomyolysis by evaluating CK level and creatinine, and performing urinalysis for myoglobinuria. Fever, discolored urine, and/or marked weakness in the patient signal the need for emergency attention.
4. If symptoms were determined to arise from non-statin cause or if the predisposing condition has been treated, you may resume statin therapy at original dose.

Click Follow Up tab to see next steps for continuing statin therapy. Click Drug Compare tab for help in selecting a different statin.

Drug Information and Interactions
Rosuvastatin (Crestor®)
See below for full drug warnings.

Dose info
Select where you are in the follow-up process

1. Labs have been returned
2. Patient was taken off original statin
3. Patient has been rechallenged with original statin
4. Considering starting patient on alternative statin
5. Muscle symptoms returned on alternative statin

Labs have been returned.

Current Follow-Up

Has a non-statin cause for muscle symptoms been identified?

- Yes
- No

Recommendation

Next Steps

- If CK is elevated above 5x ULN, check for rhabdomyolysis by evaluating creatinine and performing urinalysis for myoglobinuria.

Continuing Statin Therapy

- If no rhabdomyolysis:
  - If patient is still taking a statin, consider temporarily suspending the statin and follow up to see if symptoms resolve.
  - If patient was already taken off original statin, follow up to see if symptoms have resolved.

- Use the other steps in the Follow-Up section of this app for further guidance.

Next Follow-Up

Patient was taken off the original statin

Resources  Disclaimer  About
### Selected Secondary Drugs

Select Statin Characteristic

<table>
<thead>
<tr>
<th>Low Intensity</th>
<th>Moderate Intensity</th>
<th>High Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Atorvastatin (Lipitor®)</strong></td>
<td>10 (20) mg</td>
<td><strong>Atorvastatin (Lipitor®)</strong></td>
</tr>
<tr>
<td><strong>Fluvastatin (Lescol®)</strong></td>
<td>20-40 mg</td>
<td><strong>Fluvastatin (Lescol®)</strong></td>
</tr>
<tr>
<td><strong>Fluvastatin XL (Lescol XL®)</strong></td>
<td>80 mg</td>
<td><strong>Fluvastatin XL (Lescol XL®)</strong></td>
</tr>
<tr>
<td><strong>Lovastatin (Mevacor®)</strong></td>
<td>20 mg BID</td>
<td><strong>Lovastatin (Mevacor®)</strong></td>
</tr>
<tr>
<td><strong>Pravastatin (Pravachol®)</strong></td>
<td>10-20 mg</td>
<td><strong>Pravastatin (Pravachol®)</strong></td>
</tr>
<tr>
<td><strong>Rosuvastatin (Crestor®)</strong></td>
<td>10 mg</td>
<td><strong>Rosuvastatin (Crestor®)</strong></td>
</tr>
<tr>
<td><strong>Simvastatin (Zocor®)</strong></td>
<td>10 mg</td>
<td><strong>Simvastatin (Zocor®)</strong></td>
</tr>
</tbody>
</table>

*Legend: Dosing: BID (twice daily)
About MAQI

Michigan Anticoagulation Quality Improvement Initiative

This mobile app was produced by the Michigan Anticoagulation Quality Improvement Initiative (MAQI²), a consortium of anticoagulation clinics and experts from across the state of Michigan. Funding for MAQI2 is provided by Blue Cross Blue Shield/Blue Care Network of Michigan through the Collaborative Quality Initiative (CQI) program.

The goal of this mobile app is to provide practitioners with an up-to-date, reliable, and easy to use resource for anticoagulation. The content is based on the latest available evidence-based guidelines and research whenever possible. If you are aware of new guidelines or research, or if you have suggestions that can help improve this mobile app, please email us to let us know.

This app is based on content from the MAQI².
CHA\textsubscript{2}DS\textsubscript{2}-VASc

Annual Stroke Risk %
15

0 0 0
NOTX WAFR ASA

Anticoagulate | Score
NO | 0

C Congestive Heart Failure
H Hypertension
A Age \geq 75
D Diabetes mellitus
S Stroke/TIA/Prior Thromboembolism
V Vascular disease
A Age 65-74

CHADS-VASc HAS-BLED Dose Adjust Reference About
CHA₂DS₂-VASc

Annual Stroke Risk %

3.2

Anticoagulate

Score

3

Hypertension

Age ≥ 75

Diabetes mellitus

Stroke/TIA/Prior Thromboembolism

Vascular disease

Age 65-74

Female

CHADS₂-VASc
HAS-BLED

Annual Major Bleed Risk %

1.13

Risk Category | Points
--- | ---
LOW | 0

- Hypertension
- Abnormal renal function
- Abnormal liver function
- Hemorrhagic stroke
- Mjr bleed hx or bleeding disposition
- Labile INRs
- Age ≥ 65
Adjust Warfarin Dosage

Notes | Adjusted Rx (mg/week)
--- | ---
No change necessary | 35

Pills/Week | Pill Size | Pill Color
--- | --- | ---
7 | 5mg | [Orange]

For INR target range of 2-3 only. Based on RE-LY Trial algorithm.

Pill mg | Dose | INR
--- | --- | ---
5 | 35 | 2.5

CHADS-VASc, HAS-BLED, Dose Adjust, Reference, About
<table>
<thead>
<tr>
<th><strong>CHADS2</strong></th>
<th><strong>CHA2DS2-VASc</strong></th>
<th><strong>HAS-BLED</strong></th>
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</thead>
<tbody>
<tr>
<td>CHF/LV dysfunction (diagnosed at any time in the past)</td>
<td>Vascular Disease History (Prior MI, peripheral artery disease, or aortic plaque)</td>
<td>Abnormal renal function</td>
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<tr>
<td>Hypertension (controlled or uncontrolled)</td>
<td>Age 65-74 (cannot be selected if &quot;AGE ≥ 75&quot; is checked)</td>
<td>Abnormal liver function</td>
</tr>
<tr>
<td>Age ≥ 75 (cannot be selected if &quot;AGE 65-74&quot; is checked)</td>
<td>Female</td>
<td>History of major bleeding</td>
</tr>
<tr>
<td>Diabetes (Type 1 or 2) controlled or uncontrolled</td>
<td></td>
<td>History of labile INR (time in therapeutic range &lt; 60 %)</td>
</tr>
<tr>
<td>TIA or stroke at any time in the past</td>
<td></td>
<td>Current &quot;excess&quot; use of alcohol</td>
</tr>
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**SCORE:**

**CHADS2:**

**CHA2DS2-VASc:**

**HAS-BLED:**

By using this app you are agreeing to the Terms and Conditions of the AnticoagEvaluator.
<table>
<thead>
<tr>
<th>CHADS2</th>
<th>CHA2DS2-VASc</th>
<th>HAS-BLED</th>
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<td>TIA or stroke at any time in the past</td>
<td></td>
<td>Current &quot;excess&quot; use of alcohol</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Currently taking antiplatelet drug(s) or NSAID(s)</td>
</tr>
</tbody>
</table>

**SCORE:**

- CHADS2: 2
- CHA2DS2-VASc: 3
- HAS-BLED: 1

*By using this app you are agreeing to the Terms and Conditions of the AnticoagEvaluator.*
NO THERAPY

- **ASPIRIN 80-325mg once daily**
- **ASPIRIN 75-100mg once daily + CLOPIDOGREL 75mg once daily**
- **WARFARIN INR 2-3**
- **DABIGATRAN 150mg twice daily**
- **RIVAROXABAN 20mg once daily**
- **APIXABAN 5mg twice daily**

**SCORE:** CHADS2: 2  CHA2DS2-VASc: 3  HAS-BLED: 1

### NO THERAPY

- **5.4%** Patient's **ANNUAL risk of stroke+thromboembolism with no antithrombotic therapy (CHADS2)**
- **4.3%** Patient's **ANNUAL risk of stroke+thromboembolism with no antithrombotic therapy (CHA2DS2-VASc)**
- **0.6%** **ANNUAL risk of major bleed with no therapy (population average)**

This app calculates individualized annual risk of ischemic stroke and thromboembolism and annual risk of major bleed using relative risk reduction from the clinical trials in combination with individual risk factors and is not the result of head-to-head trials.
ASPIRIN 80-325mg ONCE DAILY

4.2% Patient's ANNUAL risk of ischemic stroke+thromboembolism with aspirin (based on CHADS2)

22% Relative risk reduction

1.2% Absolute risk reduction

1 in 84 Chance of benefit per year

3.4% Patient's ANNUAL risk of ischemic stroke+thromboembolism with aspirin (based on CHA2DS2-VASc)

22% Relative risk reduction

0.9% Absolute risk reduction

1 in 106 Chance of benefit per year

1.1% ANNUAL risk of major bleed (population avg)

1 in 222 Chance of being harmed by aspirin (per year, major bleeding, vs. no therapy)

This app calculates individualized annual risk of ischemic stroke and thromboembolism and annual risk of major bleed using relative risk reduction from the clinical trials in combination with individual risk factors and is not the result of head-to-head trials.

By using this app you are agreeing to the Terms and Conditions of the AnticoagEvaluator.
### RIVAROXABAN 20mg ONCE DAILY

<table>
<thead>
<tr>
<th>Option</th>
<th>Annual Risk of Ischemic Stroke + Thromboembolism (with rivaroxaban)</th>
<th>Relative Risk Reduction</th>
<th>Absolute Risk Reduction</th>
<th>Chance of Benefit per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO THERAPY</td>
<td>1.8%</td>
<td>66%</td>
<td>3.6%</td>
<td>1 in 28</td>
</tr>
<tr>
<td>ASPIRIN 80-325mg once daily</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASPIRIN 75-100mg once daily + CLOPIDOGREL 75mg once daily</td>
<td></td>
<td></td>
<td></td>
<td>1 in 28</td>
</tr>
<tr>
<td>WARFARIN INR 2-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DABIGATRAN 150mg twice daily</td>
<td></td>
<td></td>
<td></td>
<td>1 in 35</td>
</tr>
<tr>
<td>RIVAROXABAN 20mg once daily</td>
<td></td>
<td></td>
<td></td>
<td>1 in 31</td>
</tr>
<tr>
<td>APIXABAN 5mg twice daily</td>
<td></td>
<td></td>
<td></td>
<td>1 in 63</td>
</tr>
</tbody>
</table>

**Patient's Annual Risk of Ischemic Stroke + Thromboembolism with rivaroxaban** (based on CHADS2)

**Relative Risk Reduction:** 66%

**Absolute Risk Reduction:** 3.6%

**Chance of Benefit per Year:** 1 in 28

**Patient's Annual Risk of Ischemic Stroke + Thromboembolism with rivaroxaban** (based on CHA2DS2-VASc)

**Relative Risk Reduction:** 66%

**Absolute Risk Reduction:** 2.9%

**Chance of Benefit per Year:** 1 in 35

**Annual Risk of Major Bleed (population avg):** 3.8%

**Chance of Being Harmed by rivaroxaban (per year, major bleeding, vs. no therapy):** 1 in 31

**Patient's Annual Risk of Major Bleed (HAS-BLED):** 2.2%

**Chance of Being Harmed by rivaroxaban (per year, major bleeding, vs. no therapy):** 1 in 63

This app calculates individualized annual risk of ischemic stroke and thromboembolism and annual risk of major bleed using relative risk reduction from the clinical trials in combination with individual risk factors and is not the result of head-to-head trials.
Subject: Anticoag Evaluator

View your custom email below.

Score

CHADS2  2
CHA2DS-VASC  3
HAS-BLED  1

**CHADS2**

CHF/LV dysfunction
(diagnosed at any time in the past)

Hypertension
(controlled or uncontrolled)

Age ≥ 75
(cannot be selected if "AGE 65-74" is checked)

Diabetes (Type 1 or 2)
(controlled or uncontrolled)

TIA or stroke
(at any time in the past)

**CHA2DS2VASC**

Vascular Disease History
(Prior MI, peripheral artery disease, or aortic plaque)

Age 65-74
(cannot be selected if "Age ≥ 75" is checked)

Female

Click the Send button to send your email.
Sunday July 19, 2015

Featured Content

**Dialysis Risk post Cardiac Surgery**

Estimate the risk of dialysis after cardiac surgery (Mehta model)

*Find in:*
Cardiology > PCI and Cardiac Surgery > Nephrology > Acute Renal Failure

*Tap for More Information*
Cancer treatment within last 6 months OR current palliation?

- Paralysis OR Paresis OR Cast of lower extremity?
- Bedridden for at least 3 days in last 4 weeks OR Major surgery in last 12 weeks?
- Tenderness localized along deep venous system?
- Swelling of entire leg?
- Unilateral calf swelling >3cm compared to the other leg?

Answer Choices

- No
- Yes
Featured Content

Dialysis Risk post Cardiac Surgery
Estimate the risk of dialysis after cardiac surgery (Mehta model)

Find in:
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Nephrology > Acute Renal Failure

Tap for More Information
<table>
<thead>
<tr>
<th>IM Essentials Flashcards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular Medicine</td>
</tr>
<tr>
<td>Endocrinology and Metabolism</td>
</tr>
<tr>
<td>Gastroenterology and Hepatology</td>
</tr>
<tr>
<td>General Internal Medicine</td>
</tr>
<tr>
<td>Hematology</td>
</tr>
<tr>
<td>Infectious Disease</td>
</tr>
</tbody>
</table>

Complication of alcohol withdrawal characterized by fever, profound confusion, and hallucinations occurring after the second to third day of abstinence.
How to Read an Electrocardiogram (ECG)
In this video, I go through the P wave, QRS complex, T an...

Episode 48: How to Read an Electrocardiogram (ECG/EKG)
Patent Ductus Arteriosus
This is the best online medical lectures site, providing hig...

High Yield Points
- "Machine-like murmur"
- Patenty maintained by FGE and low oxygen

Cardiovascular examination - OSCE Guide...
A clear concise, step by step, OSCE guide, demonstrating...
Endocarditis, prophylaxis

**PATHOGENS**

- Oral flora: *Streptococcus viridans* group is usual concern for dental prophylaxis for endocarditis
- *S. aureus*: occasional cause on preventable basis if procedure in high-risk patient with active staphylococcal infection.

**CLINICAL**

- Based upon American Heart Assoc 2007 recommendations, clinical indications (e.g., mitral valve prolapse) are no longer an indication for prophylaxis. People needing prophylaxis now much more limited scope of underlying condition or planned procedure.
- Heart conditions requiring prophylaxis:
  - Any prosthetic heart valve
  - Previous endocarditis
  - Congenital heart disease
    - Unrepaired cyanotic CHD, including palliative shunts and conduits
    - Completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first 6 months after the procedure (rationale...
valve prolapse) are no longer an indication for prophylaxis. People needing prophylaxis now much more limited scope of underlying condition or planned procedure.

- Heart conditions requiring prophylaxis:
  - Any prosthetic heart valve
  - Previous endocarditis
  - Congenital heart disease
    - Unrepaired cyanotic CHD, including palliative shunts and conduits
    - Completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first 6 months after the procedure (rationale is that it takes 6 mos to endothelialize)
    - Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device (which inhibit endothelialization)
  - Heart transplant with valvulopathy

- Applicable dental procedures requiring prophylaxis:
  - Manipulation of gingiva, periapical area of teeth or perforation of oral mucosa

- Biopsies through infected respiratory mucosa or skin/skin structure also recommended indications for prophylaxis.

- GI and GU procedures are no longer indications for endocarditis prophylaxis.

### Prophylaxis

#### Antibiotics

- Time: single dose 30-60 min before procedure.
- Oral agent, dental: amoxicillin 2gm PO x 1 dose.
  - Penicillin allergy: cephalexin 2gm or clindamycin 600mg or azithromycin 500mg or clarithromycin 500mg.
- Parenteral agent: ampicillin 2gm IV or IM or cefazolin 1gm IM or IV or ceftriaxone 1gm IM or IV.
  - If biopsy through active infection, consider vancomycin if MRSA concern.
  - Penicillin allergy: cefazolin or ceftriaxone 1gm IV or IM or clindamycin 600mg IV or IM.

#### Selected Drug Comments

**Drug** | **Recommendation**
--- | ---
Amoxicillin | This drug is used because it is well absorbed and it is active against the major anticipated bacterial pathogen from oral manipulation: viridans streptococci. Need a single high dose (2gm), 1hr pre-procedure.
Gentamicin | Historically had been added to ampicillin, amoxicillin or vancomycin to augment activity versus Enterococcus. No longer primarily recommended.
Troponin: the basis of decision-making in suspected acute coronary syndromes and beyond.

Thomas F. Lüscher, MD, FESC

The evaluation of patients presenting to the emergency department with suspected acute coronary syndrome remains a clinical challenge. The traditional assessment includes clinical risk assessment based on history, symptoms, cardiovascular risk factors with serial ECGs and, more recently, measurements of cardiac troponin and other biomarkers. Troponins are much more specific for myocardial necrosis than previously used biomarkers and have moved to central stages in decision-making in patients presenting with acute chest pain. This review presents an update on the role of biomarkers in the management of such patients.

Several biomarkers, including reactants in particular cardiac troponin C (cTnC) and troponin I (cTnl), are now used in the evaluation of patients presenting with acute chest pain. Indeed, in spite of the increasing use of high-sensitivity troponin assays, considerable numbers of patients with acute coronary syndromes are missed and are at increased risk of death. Thus, the second edition of the American Heart Association's guideline for the treatment of acute coronary syndrome in patients presenting with acute chest pain, released in 2015, emphasizes the use of high-sensitivity troponin assays in the evaluation of patients presenting with acute chest pain.

Troponin release in patients with acute coronary syndromes may also be used for long-term follow-up in patients after successful revascularization or in patients at increased risk of future events. The use of troponin monitoring in the assessment of patients with acute coronary syndromes has been shown to improve risk stratification and outcomes. However, the role of troponin monitoring in the management of patients with acute coronary syndromes remains controversial.

In conclusion, the role of biomarkers in the evaluation of patients presenting with acute chest pain is evolving. High-sensitivity troponin assays are now recommended for use in the evaluation of patients with acute chest pain. However, the role of troponin monitoring in the management of patients with acute coronary syndromes remains controversial. Further research is needed to clarify the role of biomarkers in the management of patients with acute coronary syndromes.

Affiliation: Division of Cardiovascular Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA.
Heart failure is a common, costly, and debilitating syndrome that is associated with a highly complex drug regimen, a large number of comorbidities, and a large and often disparate number of healthcare providers. All of these factors conspire to increase the risk of heart failure exacerbation by direct myocardial toxicity, drug-drug interactions, or both. This scientific statement is designed to serve as a comprehensive and accessible source of drugs that may cause or exacerbate heart failure to assist healthcare providers in improving the quality of care for these patients.

Abstract: Heart failure is a common, costly, and debilitating syndrome that is associated with a highly complex drug regimen, a large number of comorbidities, and a large and often disparate number of healthcare providers. All of these factors conspire to increase the risk of heart failure exacerbation by direct myocardial toxicity, drug-drug interactions, or both. This scientific statement is designed to serve as a comprehensive and accessible source of drugs that may cause or exacerbate heart failure to assist healthcare providers in improving the quality of care for these patients.

Heart failure (HF) remains the leading discharge diagnosis among patients 65 years of age. The estimated cost for treatment of HF in Medicare recipients is $31 billion and is expected to increase to $58 billion by 2020. Hospitalization rates for HF are the largest segment of these costs, it is likely that the prevention of drug-drug interactions and direct myocardial toxicity would reduce hospital admissions, thus both reducing costs and improving quality of life.

Patients with HF often have a high medication burden consisting of multiple medications and complex dosing regimens. On average, HF patients take 6.8 prescription medications per day, resulting in 10.1 doses a day. This estimate does not include over-the-counter (OTC) medications or complementary and alternative medications (CAMs). More than 2 million Americans consume vitamins or CAMs, especially those with chronic illnesses. With many prescription medications switched to OTC status, the consumption of OTC products appears to be increasing.

HF patients are the largest consumers of OTC medications, taking on average 4 OTC medications per day. Unfortunately, the prevalence of OTC and CAM use in patients with HF is limited. A recent study of 161 patients with HF, 88% reported using OTC medications, 34.8% took vitamin supplements, and 65.2% took vitamins.

The HF syndrome is characterized by a broad spectrum of both cardiovascular and noncardiovascular comorbidities. Five or more cardiovascular and noncardiovascular chronic conditions are present in 40% of Medicare patients with HF. The reasons for polypharmacy among patients with HF can be both complex and multifactorial. Some of the reasons may be related to the increasing number of guideline-directed medications for HF and other comorbidities, as well as the increasing comorbidity burden in an aging population that may warrant an increasing number of comorbid and provider panelists.
Featured CME/CE

Seeing Into the Future: Primary Care and Eye Specialist Collaboration for Patients with Diabetes
Source: Global Education Group and FocusCME
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Diabetes @Point of Care™
Source: @Point of Care
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Managing the Patient with Metastatic Melanoma: A Comprehensive, Evidence-Based Approach
Source: Robert Michael Educational Institute LLC (RMEI)
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Heart Failure Management: Current and Future Challenges
Source: Horizon CME
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Part 2: LDL-C Reduction in the Patient with Diabetes: How Low Should We Go and How Should We Get There?
Source: Medintelligence
08/16/16 | FEATURED CME
What Halved PCI Readmits at This Center?

Aug 23, 2016
By Nicole Lou
Reporter, MedPage Today/CRTonline.org

After a major hospital adopted several institutional changes to better manage patients after percutaneous coronary intervention (PCI), readmission rates fell by nearly half, an internal analysis found.

Hospital readmits at Boston's Massachusetts General Hospital declined from 9.6% in 2011 -- the year the changes were first implemented -- to 5.3% in 2015, according to a group there led by Jason H. Wasfy, MD, MPhil.
Medscape
No Mortality Risks With PCI Performed Offsite

Data from a large UK registry suggest that PCI performed without cardiac thoracic surgical backup is not associated with an increased risk of death at 30 days, 1 year, or 5 years compared with onsite PCI.

Heartwire from Medscape, July 20, 2015
3D Printing of Heart Aids in LAA-Closure Procedure

In a single 74-year-old patient, Australian researchers used a personalized 3D printing of the left atrium and left atrial appendage to appropriately size the Watchman device for closing off the appendage.

Heartwire from Medscape, July 17, 2015

Cardiology Perspectives

Glomerular Filtration Rate and Coronary Artery Calcification
What is the connection between glomerular filtration rate and the risk for coronary artery calcification in middle-aged men without CKD?
Nephrology Dialysis Transplantation, July 20, 2015

Finding Gatekeeper to Cardiac Catheterization Laboratory
What factors influence the potential of CCTA to serve as an effective gatekeeper to invasive coronary angiography?
Journal of the American College of Cardiology, July 20, 2015

Insulin Pump vs. Daily Injections and CV Mortality in T1DM
Which mode of insulin therapy is associated with lower cardiovascular mortality in patients with Type 1 diabetes: subcutaneous insulin infusion or multiple daily insulin injections?

Business of Medicine

Education Evolution: Changes in Medical Learning
As part of Medscape's 20th anniversary, a medical student compares her present-day learning experience with that of others who graduated many years ago, and considers what changes are still needed.
Medscape Med Students, July 20, 2015

Is Hospital Employment of Physicians Peaking or Pauding?
Gastrointestinal Complications and Antiplatelets: An Update

E. Magnus Ohman, MD; Deepak L. Bhatt, MD, MPH; James M. Scheiman, MD; David J. Whellan, MD

CME Released: 12/20/2012; Valid for credit through 12/20/2013

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Director of Jefferson Coordinating Center for Clinical Research
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Alphabet lets Google be more ambitious, more boring and more crazy at the same time

"iPhone 6s" Could Face Negative Growth Due to Low China Sales & Ambivalence Towards Force Touch

Twitter sees 'largest increase' ever in government requests for account info in first half of 2015

Leak shows Galaxy S6 Edge+ preorders start August 21
Fish oil could help prevent mental health problems in those most at risk

The results of a small study appear to show that a three month course of daily fish oil capsules could reduce the rate of psychotic disorders in young people.

Ian Sample, science editor

Eating more fish or taking regular fish oil supplements may help prevent psychosis in those most at risk, researchers claim.

A three month course of daily fish oil capsules appeared to significantly reduce the rate of psychotic disorders in young people, an improvement that seemed to persist when doctors assessed their mental health seven years later.

But while the findings are intriguing, they come from a very small study of teenagers and young adults. The benefits must now be shown in a much larger group before doctors can make any recommendations about the use of fish oils to prevent mental health problems.

Paul Amminger at the University of Melbourne reported in 2010 that a three month course of daily fish oil capsules appeared to stave off psychotic illnesses in teenagers and young adults aged 13 to 24 deemed at high risk of developing the disorders. Seven years on, his group has now revisited 71 of the original 81 participants and shown that the protective effects seem to persist.

Writing in the journal Nature Communications, the scientists report that 4 out of 41 of those who took fish oil for three months had developed psychosis in the seven years since, compared with 15 out of 40 who received a placebo capsule during the trial.

Those on the placebo wing of the trial appeared to develop psychosis more quickly than those taking fish oils, and had an overall greater likelihood of having other psychiatric disorders, the study found.

Schizophrenia is one of the most common serious mental health conditions. One in 100 people in Britain experience symptoms, such as
The Roanoke Island Colony: Lost, and Found?

By THEO EMERY | AUGUST 10, 2015

MERRY HILL, N.C. — Under a blistering sun, Nicholas M. Luccketti swatted at mosquitoes as he watched his archaeology team at work in a shallow pit on a hillside above the shimmering waters of Albemarle Sound. On a table in the shade, a pile of plastic bags filled with artifacts was growing. Fragments of earthenware and pottery. A mashed metal rivet. A piece of a hand-wrought nail.

They call the spot Site X. Down a dusty road
CardioSmart
American College of Cardiology
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Normal

Left Blood Flow

Right Blood Flow

Four Chambers

Vascular

Heart Attack

Muscular

Heart Failure

Valves

Mitral Valve Prolapse

Electrical

Atrial Fibrillation

Ventricular Fibrillation
Moderate atherosclerosis

Fatty build-up (plaque)
Guidelines for Interventional Spine and Pain Procedures in Patients on Antiplatelet and Anticoagulant Medications

Search By Drug

Search By Procedure

View Checklist

The information provided is based on published data and expert opinion. It is to be used as a recommendation only. Clinical judgement by a physician is required in every situation. User assumes all responsibility for decisions made in concert with the use of this app.

Code Developed By: Mustard Seed Software

Powered by VANDERBILT
Type procedure name to search:

- Sympathetic Block, Stellate
- Sympathetic Block, Thoracic
- Transforaminal Epidural Steroid Injection (ESI), Cervical
- Transforaminal Epidural Steroid Injection (ESI), Lumbar
- Transforaminal Epidural Steroid Injection (ESI), Sacral
- Transforaminal Epidural Steroid Injection (ESI), Thoracic
- Trigger Point Injections
- Vertebral augmentation
- Vertebroplasty

**Hold Before Procedure?**

- 7 Days

**Restart After Procedure?**

- 12-24 Hours

Published: 6/1/2015
The official Twitter feed for cardiology today, featuring news and perspectives for the cardiology specialist.

**The Lancet**
@TheLancet
Welcome to The Lancet on Twitter. Keep in touch with The Lancet, one of the world’s leading general medical journals, published weekly since 1823.

**JAMA**
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**AmerColl Cardiology**
@ACGinTouch
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Cardiology News is the leading newspaper for cardiologists.

**Medscape**
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Medscape provides you with breaking medical news; reference on drugs, diseases, and procedures; and free CME, all across 30+ specialties.

**NEJM**
@NEJM
The New England Journal of Medicine (NEJM.org) is the world’s leading medical journal and website.

**Mayo Clinic**
@MayoClinic
An integrated clinical practice, education and research institution specializing in treating patients. Account maintained by @MayoClinic/MCCSM.
Popular Mechanics

Checkmate: chess player caught using morse code to cheat

Checkmate: Chess Player Caught... What's Morse code for "banned" a... popularmechanics.com

Popular Mechanics

Here are 13 unflattering things we learned about Steve Jobs from 'The Man in the Machine'

13 Unflattering Facts About Steve... Steve Jobs: The Man in the Machin... popularmechanics.com

Popular Mechanics

The 20 best cars that still offer a manual transmission

The 20 Best Cars That Still Offer a...
Checkmate: Chess Player Caught Using Morse Code to Cheat

What's Morse code for "banned" again?

An Italian chess player named Arcangelo Ricciardi was kicked out of the recent Imperia Chess Festival after officials discovered he was wearing a camera around his neck attached to a box in his armpit. It's believed that Ricciardi was allegedly cheating using some kind of Morse code system.

A referee named Jean Coqueraut noticed that Ricciardi had been blinking in an odd fashion while holding his hand under his armpit. The theory goes that someone was watching the video feed, putting the moves to a computer, and relaying the suggested moves back.
Succession Management Implementation Guide

Four Key Steps for Executing High Impact Succession Plans

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Executive Summary

Three guiding principles for succession management programs:

1. Hospital and health care systems will face exceptional departure rates due to impending baby boomer retirements. To minimize the disruptive impact of leadership turnover, HR departments are spearheading organizational efforts to develop succession plans.

2. With high-performing organizations striving to execute a high-impact succession management strategy because of today’s common misconceptions:
   - Succession management programs differ from leader development programs.
   - Not every leader needs a succession plan.
   - A comprehensive approach is not always the right approach.

3. Four key steps for executing high-impact succession plans:
   - This guide equips members with guidance, resources, and tools to support execution of these steps.
   - Pinpoint future leadership gaps. Organizations balance succession planning on these conditions with a well-execution in both positions that have multiple