Ambulatory Update

OCT. 11, 2019

Question

- The clinical practice guideline for the management of asymptomatic bacteruria states the following:
  - A. In older patients with functional impairment and/or cognitive impairment with bacteruria and delirium (acute MS change) and no local GU symptoms of fever of instability, careful observation is recommended along with appropriate assessment for causes of delirium
  - B. In older patients with functional impairment and/or cognitive impairment with bacteruria and a fall, treatment is recommended for the bacteruria.
  - C. In pts undergoing elective nonurologic surgery, urine should be checked for bacteruria and treated.
  - D. Pts with diabetes should be screened for and treated for asymptomatic bacteruria.
  - E. 2 of the above statements are true.

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Clinical Practice Guidelines for the Management of Asymptomatic Bacteriuria

- 2019 Update by IDSA

Asymptomatic bacteruria

- Defined as $\geq 10^5$ CFU/ml irrespective of presence of pyuria in the absence of signs or symptoms attributable to UTI.
- Common finding in some healthy female populations and in many women of men with abnormalities of the GU tract that impair voiding

III. Should ASB Be Screened for and Treated in Pregnant Women?

Recommendations

1. In pregnant women, we recommend screening for and treating ASB (*strong recommendation, moderate-quality evidence*).

V. In an Older, Functionally or Cognitively Impaired Patient, Which Nonlocalizing Symptoms Distinguish ASB From Symptomatic UTI?

Recommendations

1. In older patients with functional and/or cognitive impairment with bacteriuria and delirium (acute mental status change, confusion) and without local genitourinary symptoms or other systemic signs of infection (eg, fever or hemodynamic instability), we recommend assessment for other causes and careful observation rather than antimicrobial treatment (*strong recommendation, very low-quality evidence*).

2. In older patients with functional and/or cognitive impairment with bacteriuria and without local genitourinary symptoms or other systemic signs of infection (fever, hemodynamic instability) who experience a fall, we recommend assessment for other causes and careful observation rather than antimicrobial treatment of bacteriuria (*strong recommendation,*

XII. Should Patients Undergoing Elective Nonurologic Surgery Be Screened and Treated for ASB?

Recommendation

1. In patients undergoing elective nonurologic surgery, we recommend against screening for or treating ASB (*strong recommendation, low-quality evidence*).

45 year old with no significant PMH has developed 3 urinary tract infections in the last year. She would like to know of an intervention that has been shown to reduce risk of recurrent UTIs.

Which of the following do you recommend?

A) Post-coital voiding

B) Oral estrogen therapy

C) Increased fluid intake

D) CBD oil

Decreasing risk of UTIs

- 140 women with recurrent UTIs (>= 3 episodes per year) that drink less than 1.5 L
- Intervention: increasing fluid intake by 1.5 L per day
- Monitored for 1 year
- Result: 1.7 episodes vs 3.2 episodes; $p < 0.001$

JAMA Intern Med. 2018;178(11):1509-1515

Question

- A patient with known cardiovascular disease on antiplatelet therapy suffers an intracranial hemorrhage. He is seeing you back in follow up 3 months after the event. You should:
  - A. restart antiplatelet therapy in 3 months (6 months after event)
  - B. restart therapy now
  - C. Do not restart antiplatelet therapy due to history of hemorrhagic stroke

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Effects of antiplatelet therapy after stroke due to ICH (RESTART: a randomized, open-label trial

- 537 patients recruited a median of 76 days from event
- Avoidance of antiplatelet therapy vs. restart of one or more of oral aspirin, dipyridamole, or clopidogrel.
- 4% of 268 patients allocated to antiplatelet had recurrence of ICH, vs. 9% of 269 patients allocated to avoid antiplatelet therapy. 95% CI 0.25-1.03)
- Mostly monotherapy regimes, so effects of dual antiplatelet therapy remain uncertain
- Lancet 2019; 393: 2613-23

55 year old female with no significant past medical history comes to your office and is noted to be in afib. Her echo does not show moderate or severe mitral stenosis and her EF is normal. Her CHA_2DS_2-VASc score is calculated and noted to be 1 (one point for female).

To prevent stroke you recommend:

A) Baby aspirin

B) Full dose aspirin

C) DOAC

D) No anticoagulation is indicated

ACC 2019 Update on Afib

- **For CHA_2DS_2-VASc of 1, aspirin is no longer a recommended option**
- DOACs recommended over warfarin (except mod-severe mitral stenosis and mechanical valves)
  - CHA_2DS_2-VASc - >=2 in men and >=3 in women
  - Consider risks/benefits 1 in men, 2 in women
- ESRD and afib →warfarin or apixaban
- Edoxaban (Savaysa) – new DOAC

- Circulation. 2019;140:e125–e151

Question

- The latest immunization guidelines from ACIP advocate all of the following except:
  - A. HPV vaccinations can now be given for pts age 27-45
  - B. HPV vaccination is recommended at age 11 or 12 years and can be started at age 9.
  - C. Catch-up vaccination is recommended for all persons through age 45 who are not adequately vaccinated.
  - D. The ACIP voted against recommending PCV13 for all adults 65 or over, and shared decision making should take place with the patient.

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  - *C. Catch-up vaccination is recommended for all persons through age 45 who are not adequately vaccinated.*
  - D. The ACIP voted against recommending PCV13 for all adults 65 or over, and shared decision making should take place with the patient.

Immunization Update

- Catch up vaccination for persons through age 26 who are not adequately vaccinated for HPV.
- Individuals age 27-45 who have not been adequately vaccinated for HPV should have shared decision making
- Recommend PCV13 based on shared decision making for adults 65 and older who do not have an immunocompromising condition and who have not received PCV13 before.

67 year old patient with history of COPD presents in November with fever, chills and cough. His vital signs are stable and his lungs show wheezing without crackles.

You would like to test him for influenza and decide to do a molecular assay over a rapid influenza antigen detection test. You make this decision because molecular assays:

a) Are resulted in <5 minutes
b) Have a higher sensitivity
c) Are easier to collect
d) Are less expensive

Flu update

- IDSA Influenza update - Diagnostic testing: Molecular assays are preferred >= 92% sensitivity

- New treatment - baloxavir
  - Influenza cap-dependent endonuclease that blocks influenza proliferation by inhibiting the initiation of mRNA synthesis
  - Double-blind RCT 1064 patients mostly with influenza A –
    - baloxavir, oseltamivir, placebo – symptom relief similar to oseltamivir; viral load decreased after 24 hours
  - Single dose
  - N Engl J Med. 2018 Sep 6;379(10):913-923

  - Up to 9% resistance after 1 dose!
  - J Infect Dis. 2019 Jul 16

Question

- A 72 year old healthy female presents for annual preventative visit. Her cholesterol profile indicates a 9% risk of a cardiovascular event in the next 10 years. According to the new 2018 cholesterol guidelines, this patient should:
  - A. Start a high intensity statin
  - B. Start a moderate intensity statin
  - C. Consider another test to decide whether to treat with meds or not
  - D. New guidelines suggest no statin unless risk over 20%

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New Cholesterol Guidelines

- Assess lifetime risk for ASCVD in those aged 20-39 and recommend lifestyle interventions to prevent metabolic syndrome
- Use maximum tolerated dose of statins for secondary prevention with a goal of LDL reduction of >50%.
- Use nonstatin meds (ezetimibe, or pro-protein subtilisin/kexin inhibitors) plus statins in very high risk pts (defined as multiple major events, or a major event in the setting of multiple high-risk conditions. Add ezetimibe if LDL above 70 on maximally tolerated statin, and then add PPSK9 inhibitor if still above 70
- In severe primary hypercholesterolemia (LDL≥ 190), maximally tolerated statins should be used to reduce LDL below 100.

New Cholesterol Guidelines continued

- People with DM age 40-75 should be on moderate intensity statin. If ASCVD risk is high (20%), high intensity statin should be used
- Adults age 40-75 with LDL $\geq$ 70 and moderate ASCVD (CV risk 7.5-19.9%) should be counseled on moderate intensity statin, and those with >20% risk, counseled on use of high intensity statin.
- Consider other risk factors in making above decisions: TG, CRP, coronary calcium scores, FH and apolipoprotein.
- 2018 Cholesterol Clinical Practice Guidelines AHA/ACC

63 year old with Type 2 DM and CAD on metformin comes in for diabetes management. A1c is 8.0 and you are would like to start Empagliflozin due to its favorable cardiovascular benefit in diabetic patients.

You discuss all of the following as possible complications of SGLT-2 inhibitors EXCEPT:

a) Pancreatitis
b) Diabetic ketoacidosis
c) Lower limb amputations
d) Fournier's gangrene

Fournier's Gangrene and SGLT-2

- 55 cases reported
- High index of suspicion of this in patients taking SGLT-2

*Consider not using in patients with difficulty maintaining perineal hygiene

Ann Intern Med. 2019;170:764-769

Question

- A 73 year old man presents for an annual exam. He has been treated for hypertension. He has been taking low dose aspirin to reduce his risk of cardiovascular disease This pt should be advised to:
  - A. Quit aspiring as risks of bleeding outweigh benefits
  - B. Continue aspirin since he has hypertension
  - C. Start a PPI and continue aspirin
  - D. Reevaluate the risks/benefits of aspirin therapy

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  - D. *Reevaluate the risks/benefits of aspirin therapy*

Low-Dose Aspirin for Primary Prevention

- Older studies suggested that aspirin was associated with a relative risk reduction of 20% for first cardiovascular events.
- 3 clinical trials in 2018 suggest a modest risk reduction at best, comparable with the risk of bleeding.
- ASPREE, ASCEND, and ARRIVE trial
- ACC/AHA task force on primary prevention of cardiovascular disease 2019 report:
  - Aspirin should be used infrequently in the routine primary prevention of ASCVD because of lack of net benefit.
  - NEJM 2018; 379: 1519-1528, 1529-1539 and Lancet 2018: 392: 1036-1046

45 year old with mild intermittent asthma presents for follow-up. He is on Flovent 110 mcg twice daily. He is having a difficult time affording his Flovent as well as a difficult time with adherence. He would like to know of a more affordable solution.

You discuss that which of the following has been shown to have a similar rate of reduction of asthma exacerbations compared to daily inhaled corticosteroid:

A) Cetirizine
B) Fluticasone nasal spray
C) As needed budesonide-formoterol
D) Formoterol daily

Asthma Updates

SYGMA I:

3849 patients with mild asthma – terbutaline group, budesonide-formoterol group as needed and budesonide maintenance

- Severe exacerbations with the same between budesonide-formoterol and budesonide maintenance
- Budesonide-formoterol as needed was superior for symptom control and control of asthma compared to terbutaline
- Budesonide maintenance was superior for symptoms control compared to budesonide-formoterol prn

SYGMA II

- 4215 patients with mild asthma – budesonide-formoterol group and budesonide maintenance group
- Intervention: As needed budesonide-formoterol vs budesonide maintenance
- Severe exacerbations with the same between budesonide-formoterol and budesonide maintenance
- Less symptom control with budesonide-formoterol
- Less corticosteroid exposure in budesonide-formoterol

- NEJM. 2018; 378:1877-87; NEJM. 2018; 378:1865-76

- 65 year old with COPD on LABA and LAMA follows up 1 month after hospitalization for a COPD exacerbation. He is feeling better, but this is the 3rd exacerbation he has had in the last year. He does not have significant dyspnea when he is not in an exacerbation and CAT score is 8. You review his adherence and inhaler technique in the office. The next best step in management would be to:

A) Enroll in hospice

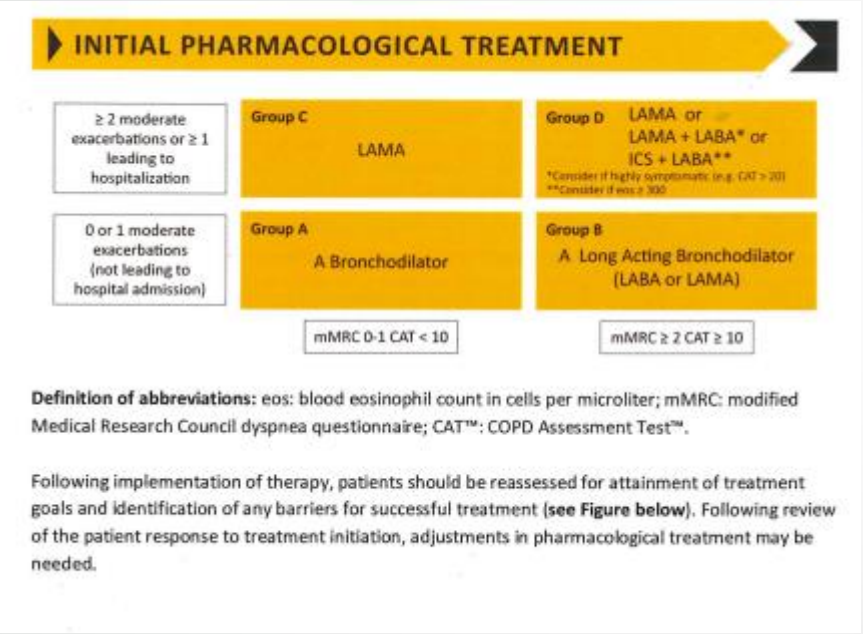
B) Check eosinophil count

C) Add azithromycin

D) Add roflumilast

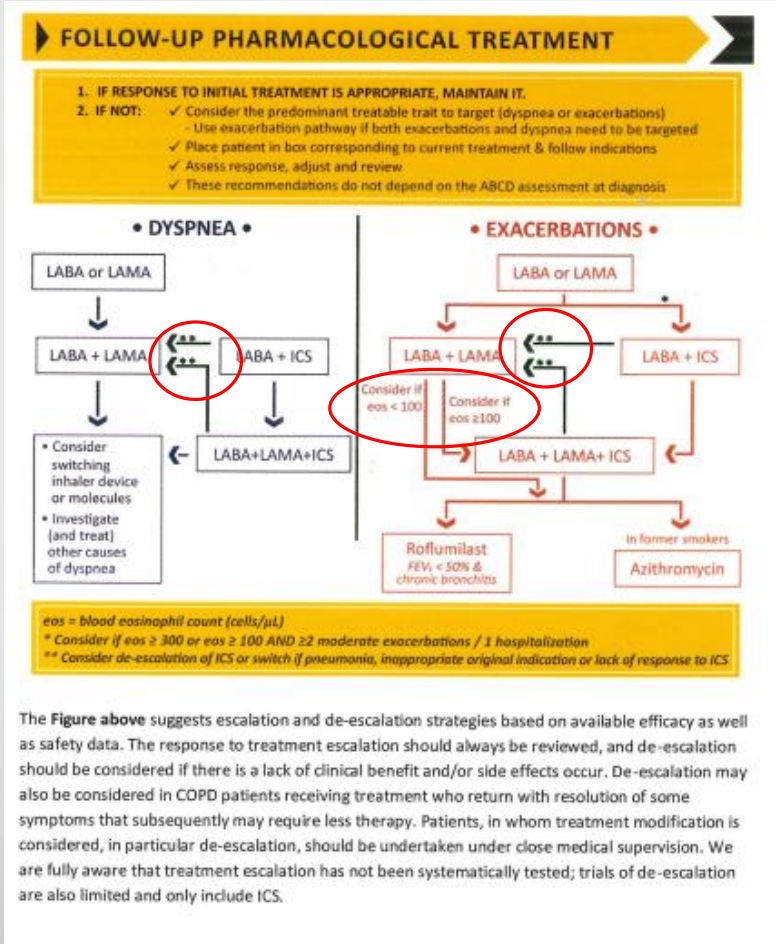
COPD

- New GOLD guidelines - 2019
- Use ABCD groups at initial diagnosis to determine initial therapy but do not use these groups to tailor therapy in follow-up
- Follow-up – use pathways for escalation or de-escalation of therapy
  - Dyspnea
  - Exacerbations



Definition of abbreviations: eos: blood eosinophil count in cells per microliter; mMRC: modified Medical Research Council dyspnea questionnaire; CAT™: COPD Assessment Test™.

Following implementation of therapy, patients should be reassessed for attainment of treatment goals and identification of any barriers for successful treatment (**see Figure below**). Following review of the patient response to treatment initiation, adjustments in pharmacological treatment may be needed.



The **Figure above** suggests escalation and de-escalation strategies based on available efficacy as well as safety data. The response to treatment escalation should always be reviewed, and de-escalation should be considered if there is a lack of clinical benefit and/or side effects occur. De-escalation may also be considered in COPD patients receiving treatment who return with resolution of some symptoms that subsequently may require less therapy. Patients, in whom treatment modification is considered, in particular de-escalation, should be undertaken under close medical supervision. We are fully aware that treatment escalation has not been systematically tested; trials of de-escalation are also limited and only include ICS.

- De-escalation in regards to ICS
- Eosinophil count to help guide ICS

Update on Calcitonin Gene-Related Peptide for Migraines (CGRP)

- Aimovig (erenumab)
- Ajovy (fremanezumab)
- Emgality (galcanezumab)
- Preventive injectables
- Lack of dose escalation, rapid onset of therapeutic benefits and favorable tolerability profiles
- Current indications from the American Headache Society
  - Inability to tolerate or no benefit after 6 week trial of topiramate, valproate, beta blocker, TCA, SNRI
- Proposed mechanism of action: mediating trigeminovascular pain transmission, and vasodilatory component of neurogenic inflammation
- AHS Guideline Statement, Headache, 2019;59: 1-18

Safety of PPI's

- ? C diff, osteoporosis, pneumonia, dementia, CKD
- Prospective RCT of 17,758 participants with stable CV disease and PAD randomly assigned to receive pantoprazole or placebo.
- Data collected on C diff, pneumonia, fractures, CKD, CV disease, COPD, DM, dementia, gastric atrophy, cancer, hospitalizations, mortality
- Followed for 3 years
- No statistically significant difference in any of the safety events except for enteric infections (1.4% vs. 1.0% with CI 1.01-1.75)
- "Safety of PPI Based on a Large Multi-Year, Randomized Trial of Patients Receiving Rivaroxaban or Aspirin", Gastroenterology, 2019; 157: 682-691

24 year old nurse presents to occupational health for his annual TB skin test. He has received annual TB skin tests which have been negative. He has no symptoms of TB and no known exposures. He works in a primary care office doing triage over the phone. You should:

A) Perform a TB skin test

B) Inform him TB screening is no longer required

C) Order a T-spot test

D) Order an interferon gamma release assay

TB skin test

- New guidelines from National TB Controllers Association and the CDC
- Baseline pre-placement TB skin testing and individual risk assessment
- Continued post-exposure screening and testing

- **Serial screening not universally recommended**
  - Can consider for selected groups (pulmonologists, respiratory therapists or in certain settings such as ED)
  - Annual TB education

MMWR. 2019: 68(19);439–443

Update from American Journal of Medicine

- 2018 updated cervical cancer screening guidelines for age 30-65 permit contesting every 5 yrs or hrHPV testing alone every 5 years.
- Zolendronate IV for women with osteopenia, study in New Zealand of over 2000 pts.
  - NNT over 6 yrs to prevent one fracture 10
  - NNT over 6 yrs to prevent fragility fracture 15, and 20 to prevent a symptomatic fracture
- Home BP monitoring yields lower SBP; 12 month study in UK, randomized, self monitoring with or without telemedicine or usual care.
- L-glutamine reduces pain crises in pt with SC anemia
- Beginning to see studies on DOACs for cancer related thromboembolism
- Vaginal moisturizer equal to estradiol vaginal tablet for GU syndrome of menopause

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