Take 3 – Practical Practice Pointers© April 8, 2019 Edition

FIT Testing "PS", T2D in Elderly, Metformin for Diabetes Prevention

Follow-up and Question from a Colleague

1) Potential Hidden Financial Costs With FIT Testing for CRC

Question:
As my bias is always toward high-value care, I was poised to do FIT testing for my own CRC screening. Then I heard an interesting caveat: If a screening FIT is abnormal, then the follow-up colonoscopy is no longing *screening* and might not be covered 100% as a screening test. This made me decide to undergo screening colonoscopy instead, and my total bill for the normal exam turned out to be ($0), inclusive of all prep, anesthesia, and procedural fees. Can you confirm that this rumor is true?

Answer:
This is correct. A positive non-colonoscopy screening such as FIT or FOBT should be followed by colonoscopy. That would be coded as a diagnostic colonoscopy because the intent was to investigate the positive result, and copay/deductible would apply.

For a screening colonoscopy during which polyps are found and removed, proper coding for non-Medicare patients would indicate that the colonoscopy was a screening and the patient would have no copay or deductible for that portion of the bill. However, procedure codes related to removal of polyps would be coded as well, and the patient is responsible for any copay or deductible related to polyp removal. For Medicare patients the coding used is different in the use of a modifier added to the screening procedure code, but patient responsibility follows a similar pattern. Soon after the ACA went into effect some insurance companies interpreted that the colonoscopy procedure code in this instance should indicate diagnostic rather than screening, but that has since been clarified by DHHS as incorrect.

My Comment:
While insurance policies can be infuriating, it's also important to keep perspective as to what we're trying to accomplish with any of these tests; to decrease CRC and/or overall morbidity/mortality by detecting colon CA at an early enough stage to be able to cure it or in the case of polypectomy, to prevent it in the first place. Perhaps as important as insurance coverage is understanding the performance of particular screening tests. When it comes to FIT testing, as pointed out last week, this is where "getting behind the curtain" can soon become intellectually dizzying! The performance of different FIT tests (supported once again with the study referenced below) has incredible variation. Then again, it's important to remember that there is variation in the diagnostic performance of colonoscopy as well, depending on variables such as prep and endoscopist expertise. With any screening test, false positive and false negatives will happen.

It is also important to remember why FIT testing is being promoted on a population scale in the first place. It is non-invasive and relatively inexpensive. Compliance with colorectal cancer (CRC) screening recommendations among all but the highest family income level (≥600% of federal poverty level) remains below the Healthy People 2020 target of 70%. Compliance in Federally Qualified Health Centers (FQHCs) is especially

low, estimated at 40%. It is estimated that fewer than 30% of uninsured patients are up to date on screening. For a disease that is easily curable in early stages, it is heartbreaking to have patients be diagnosed with advanced CRC, particularly when they have never been screened. So, as with all screening tests where there is more than one choice, balancing the pros/cons with personal preference is vital.

Reference:
Nielson C et al. Positive predictive values of fecal immunochemical tests used in the STOP CRC pragmatic trial. Cancer Med. 2018 Sep; 7(9): 4781–4790. Article

From the Endocrine Society Guidelines

2) Treatment of Diabetes in Older Adults

T2D is an age-related disease with a prevalence of 33% in the US population aged 65 years or older, and nearly 50% of older people meet the criteria for prediabetes. The incidence of newly diagnosed diabetes is highest among those aged 65 to 79 years. The Endocrine Society recently published its first guideline for diabetes specifically targeting patients ≥ 65. **Select recommendations include:**

Screening for diabetes and prediabetes, and diabetes prevention

- In patients without known diabetes, recommend fasting plasma glucose and/or A1C screening, and if normal results, repeat every 2 years.
- For those patients who meet the criteria for prediabetes by fasting plasma glucose or A1C, obtain a 2-hour glucose post–oral glucose tolerance test measurement. *Technical remark:* This recommendation is most applicable to high-risk patients.
- In patients who have prediabetes, recommend a lifestyle program similar to the Diabetes Prevention Program to delay progression to diabetes. *Technical remark:* Metformin is not recommended for diabetes prevention at this time, as it is not approved by the FDA for this indication (NOTE: See Pointer #3 for a different perspective). As of 2018, a Diabetes Prevention Program–like lifestyle intervention is covered for Medicare beneficiaries who meet the criteria for prediabetes.

Treatment of hyperglycemia:

- Design outpatient medication regimens to specifically minimize hypoglycemia.
- For those patients treated with insulin, perform frequent fingerstick glucose monitoring and/or continuous glucose monitoring in addition to A1C.
- Use metformin as the initial oral medication for glycemic management in addition to lifestyle management.
- For patients who have not achieved glycemic targets with metformin and lifestyle, add other oral or injectable agents and/or insulin to metformin. *Technical remark:* To reduce the risk of hypoglycemia, avoid using sulfonylureas and glinides (Prandin), and use insulin sparingly. Glycemic treatment regimens should be kept as simple as possible.

Treating complications of diabetes

- Aim for a target blood pressure of 140/90 to decrease the risk of cardiovascular disease outcomes, stroke, and progressive chronic kidney disease. *Technical remark:* Patients in certain high-risk groups could be considered for lower blood pressure targets (130/80), such as those with previous stroke or progressing

chronic kidney disease (eGFR < 60 and/or albuminuria).
- Use an angiotensin- converting enzyme inhibitor or an angiotensin receptor blocker as the first-line therapy.
- Screen annually for chronic kidney disease with an estimated glomerular filtration rate and urine albumin-to-creatinine ratio.

Management of hyperlipidemia
- Obtain an annual lipid profile.
- Recommend statin therapy for management of hyperlipidemia and to decrease CV risk.
- In patients with fasting triglycerides > 500, recommend the use of fish oil and/or fenofibrate to reduce the risk of pancreatitis.

A1C goals: Patients are stratified into the categories of:
- Good health (0-2 comorbidities, and no or few functional impairments) with A1C goals 7-7.5 (higher if on a med that can cause hypoglycemia)
- Intermediate health (≥3 comorbidities, mild cognitive impairment, and/or two or more functional impairments) with A1C goals 7.5-8
- Poor health (end-stage condition[s], moderate-severe dementia, ≥2 functional limitations, and/or residence in a long-term nursing facility) with A1C goals 8-8.5.

My Comment:
I chose to highlight this guideline to continue the ongoing dialogue as to how best to manage patients with chronic diseases as they age. It should be noted that the use of the 2 hour oral glucose tolerance test for definitive diagnosis seems neither practical nor necessary, since tight control is not a goal in this population/guideline. It should also be noted that the stratification of A1C targets depending on a patient's overall health are based on expert opinion, though having variation in targets sure does seem to make sense in the context of personalized care.

Reference:
LeRoith D et al. Treatment of diabetes in older adults: an Endocrine Society clinical practice guideline. J Clin Endocrinol Metab. 2019;104:1-55. Aricle

From the Literature

3) Use of Metformin for T2D Prevention – New Longitudinal Data

Whether metformin should be used for diabetes prevention requires a careful balance of benefits and risks. The American Diabetes Association has endorsed its use for this purpose, recommending that metformin therapy for prevention of T2D should be considered in those with prediabetes, especially for those with BMI ≥35, those aged <60, women with prior gestational diabetes mellitus, and/or those with rising A1C despite lifestyle intervention.

The Diabetes Prevention Program (DPP) and its follow-up, the Diabetes Prevention Program Outcomes Study (DPPOS) have demonstrated the beneficial effects of the diabetes medication metformin to reduce the risk of developing diabetes. In the original DPP trial, analyzed after an average of 2.8 years of follow-up, metformin was of

particular benefit in those persons who at baseline had higher fasting glucose levels (110–125) or a BMI ≥35.

This study examined the effects of metformin on diabetes prevention and the subgroups that benefited most over 15 years in the DPP and DPPOS. Adults at high risk of developing diabetes had been randomly assigned to masked placebo or metformin 850 mg twice daily. Ascertainment of diabetes development was based on fasting or 2-h glucose levels after an oral glucose tolerance test or on A1C.

The researchers found that metformin reduced the incidence of diabetes compared to placebo by 17% or 36% based on glucose or A1C levels, respectively. Overall, this would translate to a number needed to treat (NNT) of approximately 5.5 people being treated with metformin for 15 years to prevent one case of T2D. It should be noted that metformin's effect on the development of diabetes was greater for women with a history of prior GDM compared with parous women without GDM. It also had greater effect for those with higher baseline fasting glucose levels or A1C levels. It should be noted as well that the mean cumulative exposure to metformin in the original DPP participants assigned to metformin was 8.75 years, so that improved adherence would likely result in an even lower NNT.

My Comment:
I included this study in this week's Take 3 because I felt it provided some important perspective on the impact of treating patients who have prediabetes with metformin. Though an NNT of 5.5 seems impressive, this was over 15 years and it is important to remember that the development of diabetes is an intermediate outcome. We know nothing of whether morbidity or mortality was improved with this intervention. This this study also demonstrates the challenge of taking a medication over that extended period of time (50% on average).

Helping our patients truly change their lifestyle to a more healthy one and enjoy the fruit of that in all aspects of their life should continue to be our goal. In most cases, "the pill is not the point," should be our rallying cry. To that end, see today's "4th Aim Pause." Having said that, it may be worth discussing the option of metformin with patients who are young, are in one of the subgroups with increased benefit, and/or have multiple co-morbidities.

Reference:
Temprosa M, et al. Long-term Effects of Metformin on Diabetes Prevention: Identification of Subgroups That Benefited Most in the Diabetes Prevention Program and Diabetes Prevention Program Outcomes Study. Diabetes Care 2019 Apr; 42(4): 601-608. Article

Feel free to forward Take 3 to your colleagues. Glad to add them to the distribution list.

Mark

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