A Case-Based Exploration of Exocrine Pancreatic Insufficiency Webinar Questions and Answers

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1. Q: Has there been any consideration of use of a “pump” device to help deliver PERT more physiologically?

   A: I have not heard of that, but an interesting idea - kind of like an insulin pump.

2. Q: Would fat soluble vitamin supplementation be recommended for all patients with EPI? Would regular fat-soluble vitamins be adequately absorbed with PERT or is there a form that would be better absorbed?

   A: Yes, in theory, all patients with PERT probably need fat soluble vitamins. However, since level of EPI may vary - measuring levels and adding supplementation as directed by deficiencies is likely more appropriate. When vitamin adjustments are made, levels should be checked in approximately 3-4 months to make sure levels are adequate and supplementation didn’t push level too high. Water-soluble form of fat-soluble vitamins are best and taken with PERT, ideally 1st in the morning to take advantage of the body’s own enzymes and also bile acid to absorb fats.

3. Q: Is there any commonality in stool color with EPI?

   A: Sometimes it can be paler brown as they are fatty - grease can stick to the side of the toilet or look like grease when you wash a pan and float on top. Also stools with fat float, stools without fat sink.

4. Q: Is weight loss seen in all undiagnosed EPI cases?

   A: Not necessarily. Sometimes it can present with vitamin deficiency such as night blindness.

5. Q: In an obese patient, do you use actual weight to dose enzymes?

   A: That is a good question. It is probably better to either stick to lower end of recommendations starting at 500 lipase units/kg and adjust for symptoms OR probably better to use fat-based dosing which more so takes into account how much fat in the foods is being eaten.

6. Q: A 34-year-old female with the diagnosis of ETOH induced pancreatitis four years prior admits she is having difficulty giving up alcohol. Is there a test to demonstrate any pancreatic damage thus far, and to help encourage this patient to give up alcohol?

   A: Structural - MCRP, Functional - either fecal elastase or ePFT (endoscopic pancreatic function test).

8. Q: What dose of lipase units do you recommend for Schwachman Diamond syndrome in a patient that has EPI based on a fecal elastase test?

   A: I still use CF guidelines, but start on lower-middle end and so far, have not needed to go up as high. So usually start around 1000 lipase units/kg/meal.

9. Q: Outside of CF, is there a general lipase unit recommendation?

   A: Usually start at lower end of CP recommendations and optimize based on symptoms.

10. Q: Do you recommend fat soluble vitamins supplement for EPI?

    A: Water-soluble form.

11. Q: What do you recommend for a patient who does not consume pork for EPI since PERT depends on availability of pigs?

    A: Most of my patients who have religious reasons for not eating pork have told me that there is an exception for medicinal reasons. So, I recommend talking to their religious/spiritual leader if conflict, but honestly and luckily, I have not had this happen.

12. Q: What is the etiology of rectal prolapse in infants, is it less fat in ischiorectal fossae due to EPI, CF, etc.?

    A: Weakness of the levator muscle along with excessive pushing and straining with constipation and fat malabsorption. Malnutrition can contribute to the weakness of levator muscle in PI. Fat malabsorption can result in bulky stool that is hard to push out.

13. Q: For tube fed patients, are there best times to administer feedings to avoid EPI, for instance boluses vs. continuous feedings?

    A: If bolus feeds, then same as a meal - before the meal, especially if only last 1 hour or 2 at max. If longer than that, I recommend the Lipase only in-line cartridge.

14. Q: When and how is the lipase cartridge inserted?

    A: The cartridge attaches at one end to the tubing from feeding bag and the other end to the tubing that leads to the feeding tube itself - it is external to the body. Formula passing from the feeding tube into the cartridge will go through hydrolysis of fat and then will be delivered to the patient in a more digestible form.

15. Q: Are there milder versions of EPI? Can this be related to reflux at night?

    A: Yes, there are milder versions, and it is not usually related to reflux at night.

16. Q: Did I understand that all PERT require a prescription? Or are there any OTC versions?

    A: Yes, all FDA approved PERT require a prescription.

17. Q: Why is the tube feeding cartridge lipase only? Tube feedings contain complex fat, CHO and proteins.

    A: Good question! When they designed, they found a way to stabilize the lipase in the cartridge first and most efficacious. Fat is also the major source of malabsorption and symptoms, so they chose to attack that first. They hope to

make a complete cartridge in the future.

18. Q: Do you see many patients self-treating with over-the-counter enzymes? Over the counter being enzymes that are in small dosing amounts?

    A: *Yes, but I encourage them to use the FDA approved products.*

19. Q: Using the cartridge, I also change the semi-elemental formula so some of the protein will also be absorbed.

A: *You could, but you don't have to unless signs of protein malabsorption are evident.*

20. Q: You mentioned diabetes as a possible cause. Is it more likely in type 1 or type 2 diabetes? Would the duration of diabetes be a factor in the development?

    A: *It is a little mix of both because its due to some insulin resistance but is best managed with insulin. The best way to test is doing an annual OGTT on EPI patients starting at age 10.*

Disclaimer: *The responses from Meghana Sathe, MD are for general information purposes only and are not intended to address individualized requirements.*

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