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Ace Your Certification Exam

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Abstract Dr. Jayesh Shah will be publishing a quarterly column titled “ACE Your Certification Exam.” Every quarter, he will publish 5 questions with explanations to help you practice for your exam.

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1. While one is testing for ankle-brachial index (ABI), the Doppler probe is placed on which vessels of the lower extremity?
 - a. Dorsalis pedis artery and popliteal artery
 - b. Popliteal artery and femoral artery
 - c. Anterior tibial artery and dorsalis pedis artery
 - d. Dorsalis pedis artery and posterior tibial artery
2. A 68-year-old man with diabetes and a nonhealing wound on his left foot was evaluated in a wound clinic. During his complete evaluation, an ABI was performed. The patient's ABI was found to be greater than 1.4. How will you interpret his ABI results?
 - a. Patient has normal circulation.
 - b. Patient has small vessel disease.
 - c. Patient has calcified vessels.
 - d. Patient has a critically ischemic limb.
3. The most selective form of debridement is
 - a. Enzymatic debridement
 - b. Surgical debridement
 - c. Mechanical debridement
 - d. Autolytic debridement
4. An important step, although not required prior to application of an enzymatic debriding agent in a wound covered with eschar, is
 - a. Sharp debridement of edges
 - b. Mechanical debridement with pulsed lavage
 - c. Cleansing with saline
 - d. Cross-hatching with a scalpel
5. A 90-year-old woman with a history of dementia who is functionally and cognitively dependent on nursing home staff has an unstageable heel ulcer with stable eschar. What is the indication for debridement in this patient?
 - a. Local edema
 - b. Chronic pain
 - c. Dependent rubor
 - d. Dry eschar

Answers on back page.

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Answers:

1, d; 2, c; 3, a; 4, d; 5, a

Question 1: Answer d

The American Diabetes Association recommends ABI as a reproducible and quantitative test for vascular evaluation. It is simple to perform. ABI is calculated as a ratio of systolic blood pressure measured in the dorsalis pedis and posterior tibial arteries of the ankle. The higher of the two is divided by the systolic blood pressure measured in the brachial artery of the arm of a patient in a supine position. The correct answer is d.

Question 2: Answer c

ABI has limitations in diabetic patients. Patients with diabetes develop medial arterial calcification. These patients may have noncompressible vessels, which can give a falsely elevated ABI. So ABI in diabetic patients should be interpreted with caution, and the correct answer is c. See the [Table](#).

Question 3: Answer a

Among the choices, enzymatic debridement is the most selective form of debridement. Enzymes that act on necrotic tissue are categorized as proteolytics, fibrinolytics, and collagenases, depending on the tissue component they target. Collagenases target nonviable collagen tissue while sparing viable tissue, thereby making them very selective.

Table Diagnostic Interpretation of Ankle-Brachial Index (ABI)

Resting ABI	Severity
0.91–1.30	Normal
0.70–0.90	Mild obstruction
0.40–0.69	Moderate obstruction
<0.40	Severe obstruction
>1.3	Poorly compressible

Adapted from American Diabetes Association. Peripheral arterial disease in people with diabetes. *Diabetes Care*. 2003;26:3333–3341.

Question 4: Answer d

An important step, although not required prior to application of an enzymatic debriding agent in a wound covered with eschar, is cross-hatching with a scalpel. Cross-hatching, or scoring the eschar with a scalpel without cutting deeply enough to cause bleeding, is recommended prior to application of the enzyme in order to let the debriding agent penetrate into the eschar.

Question 5: Answer a

This patient has stable necrotic eschar. Based on the patient's history, the best choice is not to do debridement. The patient should be treated to keep the eschar dry with povidone-iodine, but if the patient develops signs of infection, then debridement is necessary. Localized edema could be the first sign of infection. Chronic pain and dependent rubor could be secondary to ischemia and do not warrant debridement.