Burn wound healing and treatment: review and advancements

1. Which zone of a burn is exposed to the greatest amount of heat and suffers the most damage?

A. The zone of coagulation
B. The zone of stasis / zone of ischemia
C. The zone of hyperemia
D. All of the above suffer the same amount of damage

2. Which of the following adopt a contractile phenotype and thus are involved in wound contracture?

A. Collagen
B. Fibroblasts
C. Myofibroblasts
D. Keratinocytes

3. Effective topical antimicrobials do not exist for invasive fungal infections, and fungal wound infections are associated with greater mortality rates in large burns.

A. True
B. False

4. Excess _____ consumption may exaggerate the immunosuppressed state, and since major burn injuries may also result in immunosuppression, this exaggeration may increase the risk for infection and sepsis.

A. Carbohydrate
B. Fat
C. Protein
D. All of the above

5. In addition to support with amino acids and vitamins, administration of insulin has been shown to decrease healing time by reducing protein catabolism and increasing
skeletal muscle protein synthesis.

A. True  
B. False

6. Split-thickness skin grafts can be meshed with variable expansion ratios to increase the coverage area, but concerns remain over the effect that meshing has on:

A. Range of motion  
B. The graft site healing rate  
C. Both (A) and (B)  
D. None of the above

7. Since allografts and xenografts appear to be equally effective, allografts may be a superior choice for their increased safety and reduced price.

A. True  
B. False

8. The goal in selecting the most appropriate dressing should include:

A. Providing protection from contamination and from physical damage.  
B. Allowing gas exchange and moisture retention.  
C. Providing comfort to enhance functional recovery.  
D. All of the above.

9. Controlled clinical trials in humans are beginning to produce data supporting the conclusion that hyperbaric oxygen is safe and effective for improving burn wound healing.

A. True  
B. False

Skin tissue engineering advances in severe burns: review and therapeutic applications

10. Cultured epidermal autograph sheets are fragile in nature and extreme care must be taken to avoid tangential and shearing forces while moving the patient’s limb or repositioning the patient to prevent any loss of the cell layers.

A. True
11. All of the following are advantages of using acellular dermal matrix products, except for:

A. The templates derived from decellularized tissues provide natural dermal porosities for regeneration and vascularization on the wound bed in-vivo.
B. Low risk of transmitting infectious diseases.
C. In vitro studies have shown that such products support adhesion, growth, and function of several cell types.
D. There is partial conservation of BM which might aid epidermal cell attachment.

12. Re-epithelialization might be delayed or even absent when a meshed piece of skin is expanded beyond a ratio of:

A. 1:15
B. 1:9
C. 1:6
D. 1:4