Continuing Medical Education examination

Dendritic cells as regulators of immunity and tolerance

Instructions for category 1 Continuing Medical Education credit

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Learning objectives: "Dendritic cells as regulators of immunity and tolerance"

1. To identify the functions of antigen-presenting cells in the skin, gut, and respiratory mucosa.
2. To compare the ways in which antigen-presenting cells are capable of inducing either iatrogenic or immunogenic immune mechanisms.

CME items

Question 1. Which of the following is characteristic for human epidermal Langerhans cells?

A. the expression of the marker for langerin (CD207)
B. the expression of the mannose receptor (CD206)
C. a low antigen-presenting capacity
D. the absence of CD1a expression

Question 2. Typical for antigen-presenting cells in the gut is that —

A. dendritic cells (DCs) in the lamina propria are derived from CX_3CR1^{high} $Gr1^-$ monocytes, which migrate spontaneously into inflammed tissue.
B. double-negative $CD11b^-/CD8a^-$ DCs occur only inside the epithelium.
C. DCs produce mainly proinflammatory cytokines in response to commensal bacterial signals.
D. a cross-talk between DCs and epithelial cells determines whether tolerance or active immunity is induced.

Question 3. The capacity to capture, traffic, and transfer bacteria to gut DCs is a feature of which of the following?

A. plasmacytoid DCs
B. alveolar macrophages
C. M cells
D. $CD11c^+$ interstitial DCs

Question 4. Respiratorial tolerance in the lung is partially mediated by —

A. inducible costimulator–inducible costimulator ligand.
B. CX_3CR1.
C. CCR7.
D. IgA production.