The Use of Monoclonal Antibodies in Oncology

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1. In general, the administration of monoclonal antibodies in the oncology setting should be given via IV using:
   a. Bolus push.
   b. Slow infusion.
   c. Free-flowing drip.
   d. Patient-controlled administration.

2. Mrs. Hoffman has been receiving alemtuzumab (Campath®, Berlex Inc., Richmond, CA) 30 mg three times per week for eight weeks. Recently, she required a three-week break from her therapy because of severe thrombocytopenia. Now that she is ready to resume treatment, at what dose should she be resumed?
   a. 3 mg
   b. 10 mg
   c. 30 mg
   d. 90 mg

3. Prophylactic administration of antibiotics and antiviral agents and monitoring of T-cell counts are recommended for patients receiving therapy using:
   a. Rituximab (Rituxan®, Genentech Inc., South San Francisco, CA).
   b. Trastuzumab.
   c. Alemtuzumab.

4. The advent of which of the following technologies led to the initial production of monoclonal antibodies?
   a. Fusion
   b. Genomic
   c. Polyclonic
   d. Hybridoma

5. During administration of the initial dose of rituximab, the patient starts to complain of feeling cold and subsequently begins to shiver and shake. The appropriate action to take is:
   a. Administer one ampule of sodium bicarbonate.
   b. Cover the patient with a blanket and offer a warm beverage.
   c. Stop the infusion of rituximab and administer normal saline.
   d. Place emergency medication or equipment by the patient’s infusion chair.

6. The patient being cared for has just completed a monoclonal antibody infusion that has been combined with a cytotoxic agent. The nurse should take which of the following precautions to dispose of the IV administration equipment used?
   a. Dispose of the IV bag and tubing in a trash can.
   b. Handle the IV bag and tubing per institutional hazardous waste disposal policy.
   c. No specific precautions are necessary when removing equipment.
   d. Wear gloves when removing the IV bag and disconnecting the IV tubing from the patient.

7. A patient will be receiving ibritumomab tiuxetan (Zevalin™, IDEC Pharmaceuticals, San Diego, CA). Education regarding postinfusion care will include instructing patients and caregivers to:
   a. Use only disposable dinnerware.
   b. Wash their hands thoroughly after using a toilet.
   c. Live in separate households for six weeks.
   d. Launder patients’ clothing twice using a strong bleach detergent.

8. Rituximab is an example of which type of monoclonal antibody?
   a. Human
   b. Murine
   c. Chimeric
   d. Humanized

9. The most common adverse effect of cetuximab (Erbitux™, ImClone Systems, Inc., New York, NY, and Bristol-Myers Squibb, Princeton, NJ) is:
   a. Myalgia.
   b. Acne-like rash.
   c. Cardiac toxicity.
   d. Thrombocytopenia.

10. Nursing management of the most common adverse effect associated with cetuximab includes:
    a. Using topical ointments and avoiding overexposure to the sun.
    b. Monitoring for bleeding and instituting bleeding precautions.
    c. Educating patients concerning a low-salt diet and monitoring daily weight.
    d. Providing for an exercise regimen and possible physical therapy referral.

11. Mrs. Jones reports shortness of breath with exertion and slight, pitting ankle edema. Last week, she received trastuzumab (Herceptin®, Genentech Inc.). Her symptoms have become progressively worse over the past week. The most recent chemistry profile was completed last week, and all results were within normal limits. A complete blood cell count today reveals white blood cell count of 4.6/mm³, hemoglobin 10.9 g/dl, hematocrit 32.8%, and platelet count of 350,000/mm³. Mrs. Jones now is scheduled for a weekly trastuzumab infusion. The most appropriate nursing action would be to:
    a. Reschedule treatment for next week.
    b. Administer the trastuzumab as ordered.
    c. Explain to the patient that her symptoms are a result of anemia.
    d. Notify the physician about the patient’s signs and symptoms before proceeding with the infusion.

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