Malignant Melanoma: Skin Cancer-Diagnosis, Prevention, and Treatment

Melanoma is a skin cancer caused by a malignancy of melanocytes. Incidence of melanoma is rapidly increasing worldwide, which results in public health problems. Primary extracutaneous melanomas can be ocular, gastrointestinal, mucosal, leptomeningeal, genitourinary, and lymphatic. The relationship between exposure to ultraviolet (UV) light and development of melanoma is intensively acute and complex, and intermittent sun exposure greatly increases the risk of melanoma. It is the fifth most common type of cancer in men number and the sixth most common in women. The diagnosis of melanoma is made through clinical assessment of the pigmented by health care professionals. Architectural features of malignant melanoma including asymmetry, confluence of growth, marked cellularity, and poor circumscription. The cytological feature of malignant melanoma include an irregular and thick nuclear membrane and prominent nucleoli. The preventive measures include reducing exposure to UV light and the sun. The early detection of skin cancer greatly reduces both short- and long-term morbidity and mortality. The treatment and follow-up with the doctor for melanoma patients may differ because of the stage of the tumor and the primary lesion. The typical therapy for malignant melanoma is surgical excision, immunotherapy such as interleukin 2 (IL-2), gene therapy, and biochemotherapy.

1. **What is the primary cause of melanoma, according to the text?**
   - **a.** A malignancy of melanocytes.
   - **b.** A deficiency in skin pigmentation.
2. **List at least three extracutaneous sites where primary melanoma can develop.**
   - **a.** Ocular, gastrointestinal, genitourinary.
   - **b.** Lungs, heart, brain.
3. **What is the relationship between UV light exposure and melanoma?**
   - **a.**Continuous exposure to artificial light is the main risk factor.
   - **b.** Intermittent sun exposure greatly increases the risk of melanoma.
4. **Which architectural features are associated with malignant melanoma?**
   - **a.** Asymmetry, confluence of growth, marked cellularity.
   - **b.** Symmetry, slow growth, low cellularity.
5. **What are two cytological features of malignant melanoma?**
   - **a.** Irregular and thick nuclear membrane, prominent nucleoli.
   - **b.** Thin nuclear membrane, absence of nucleoli.
6. **What preventive measures are suggested to reduce the risk of melanoma?**
   - **a.** Increasing vitamin D intake through sun exposure.
   - **b.** Reducing exposure to UV light and the sun.
7. **How does early detection of melanoma affect patient outcomes?**
   - **a.** It reduces both short- and long-term morbidity and mortality.
   - **b.** It has little to no effect on long-term patient outcomes.
8. **What treatments are mentioned for melanoma?**
   - **a.** Surgical excision, immunotherapy (IL-2), gene therapy.
   - **b.** Radiation therapy, hormone replacement, chemotherapy.

Vocabulary Activity:

Match the following terms with their definitions:

1. **Melanocytes**:
   - **a.** Cells responsible for producing keratin, a structural protein in skin and hair.
   - **b.** Cells responsible for producing melanin, the pigment in the skin.
2. **Extracutaneous**:
   - **a.** Occurring outside the skin.
   - **b.** Occurring beneath the skin.
3. **Cytological**:
   - **a.** Related to the study of cells.
   - **b.** Related to the study of blood.
4. **Immunotherapy**:
   - **a.** Treatment that involves replacing damaged tissue with new tissue.
   - **b.** Treatment that uses the immune system to fight diseases.

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