

Images in Anesthesiology: Skin Mottling after Induction

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ASCENDING skin mottling demonstrated in the presented image (fig.) was noted after induction of general anesthesia and positioning. The differential diagnosis included adverse drug reaction, hypothermia, ischemia, acute anemia, and sepsis. Patient survey revealed an irrigation bottle placed under the axilla of the operative limb to facilitate surgical prep as seen in the figure. Removal of the bottle resulted in immediate resolution of the mottling and a palpable radial pulse. Appropriate patient positioning is critical for patient safety in the operating room. Ischemic nerve damage occurs as a result of failure of blood flow to the neuron, resulting in metabolic stress that often presents as paresthesias.¹

External vascular compression to a limb results in characteristic skin mottling described as Bier spots (indicated in the image): pallid, violet spots that rapidly increase in quantity and size with loss of circulation and are caused by abnormal venoarteriolar tone.² Stroking causes them to temporarily disappear, and restoration of blood flow typically produces hyperemia often with several minutes of persistent spots. The mottling is scattered and irregular and extends peripherally, winding into larger areas with well-demarcated progressive margins. Bier spots are also associated with pregnancy, scleroderma renal crisis, aortic hypoplasia and coarctation, alopecia areata, palmar hyperhidrosis, and lymphedema. It is important

to note any preexisting hypopigmented macular skin findings before anesthetic delivery and surgical positioning.³ Evaluation of intraoperative skin changes should include vital signs assessment, distal pulse palpation, checking capillary refill, identifying possible triggers, and noting distribution of skin changes, quality, and associated signs or symptoms.

Competing Interests

The authors declare no competing interests.

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