

of patients may be left with residual findings, such as telangiectasia, redundant fatty tissue, or skin atrophy (Ji, Chen, Li, et al, 2014). Topical or systemic propranolol may be used in some cases to shrink the lesions (Püttgen, 2014). **Cavernous venous hemangiomas** involve deeper vessels in the dermis and have a bluish red color and poorly defined margins. These latter forms may be associated with the trapping of platelets (**Kasabach-Merritt syndrome**) and subsequent thrombocytopenia (Kelly, 2010; Witt, 2015).

Hemangiomas may also occur as part of the PHACE syndrome (Sidbury, 2010):

Posterior fossa brain malformation

Hemangiomas (segmental cervicofacial)

Arterial anomalies

Cardiac defects, including coarctation of the aorta

Eye anomalies

Although most hemangiomas require no treatment because of their high rate of spontaneous involution, some vision and airway obstruction may necessitate therapy. Systemic propranolol or prednisone may deter further growth. Subcutaneous injections of interferon or vincristine may be required if prednisone therapy and the pulsed-dye laser fail to control a problematic hemangioma; however, the associated side effects may outweigh the benefits of therapy in some cases (Holland and Drolet, 2010).

## **Nursing Care Management**

Birthmarks, especially those on the face, are upsetting to parents. Families need an explanation of the type of lesion, its significance, and possible treatment.\* They can benefit from seeing photographs of other infants before and after treatment for port-wine stains or after the passage of time for hemangiomas. Pictures taken to follow the involution process may further help parents gain confidence that progress is taking place.

If laser therapy is performed, the lesion will have a purplish black