



US-guided CVC placement

Central venous catheter (CVC) placement is an integral part in management of many medical and surgical conditions in children. Percutaneous placement of CVC in the subclavian or internal jugular vein is a blind procedure using external anatomical landmarks technique. As such, they carry an inherent risk of puncturing the artery or lung parenchyma with its attendant complications associated with variation in venous anatomy and depth of cannulating needle. Doppler ultrasound (US) guided CVC placement permits direct visualization and cannulation of the central veins in the neck (internal jugular vein), specially when placing CVC in very small babies. US-guided CVC placement has also a reduced rate of complications and the rate of needle punctures is also reduced. Reducing the rate of needle punctures reduce the rate of venous thrombosis. The right internal jugular vein is preferred with this technique in most patients. Specific training in interventional radiology is not essential to perform this technique safely and with a low complication rate, but a learning curve is associated with dominating this technique. US-guided CVC placement can be done safely in children of all ages.

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Melanoma

Melanoma is very rare in children with approximately 400 new cases diagnosed yearly in the United States and 2% of all melanoma cases. The incidence of melanoma is increasing worldwide. With accurate diagnosis the outcome for pediatric melanoma is good. Factors associated with an increased risk of melanoma includes white race, female sex, fair complexion, red or blonde hair, light eye color, tendency to burn with

ultraviolet light, dysplastic nevi, congenital nevi, increase number of benign nevi, family history and immunosuppression. Early in infancy melanoma arises from transplacental metastasis, congenital or large nevi. Clinical signs suspicious of melanoma include increase or change in lesion size or color, bleeding, irregular border or pigmentation distribution, pruritus or enlarged regional lymph nodes. Trunk and extremity are the most common location. Superficial spreading melanoma is the most common histologic variant. Recurrence is more common in black children and misdiagnosed cases. Increase awareness with biopsy of suspicious lesions confirms the diagnosis while establishing depth of tumor. Excision with sentinel lymph node (SL N) biopsy or complete lymph node dissection is curative and improves stage-specific survival in pediatric melanoma. The sentinel node status correlates with primary tumor depth. Pediatric patients have a higher incidence of SLN metastases than adults yet have a lower incidence of recurrence.

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Rectal Strictures

Rectal strictures in children can occur after inflammatory bowel disease, trauma, or most commonly postoperative following a coloanal anastomosis. Factors that contribute to the formation of a postoperative rectal stricture include ischemia, leakage and infection, inflammatory response to anastomotic material, circular stapler size, and fecal contact with the anastomosis. Stapling devices are associated with a higher rate of postoperative strictures than handsewn anastomosis. Clinically, the patient with a rectal stricture after surgery can develop partial or complete bowel obstruction, frequent bowel movements, lower abdominal fullness, sense of residual stools followed by anal pain, or the stricture is diagnosed after preoperative imaging prior to closing a diverting stoma. Anastomotic colorectal strictures are usually defined as being less than 10 to 12 mm in diameter and are usually short (< 1 cm in length). A radiographic assessment of the stricture length must be done. Depending on the diameter and length of the stricture management might consist of transanal dilatations (manual or by bougie), hydrostatic balloon dilatations, microwave coagulation therapy, transanal incision, excision, or

reanastomosis by means of a circular stapler. Use of steroid injection (Kenalog) has also been utilized. Postoperative strictures usually respond well to direct dilatations.

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