Neuroblastoma

Neuroblastoma is a primitive childhood tumor taking its origin from the medullary portion of the adrenal gland or in other parts of the sympathetic nervous system. It is considered to be the third most common malignancy in childhood. This tumor usually occurs in children under the age of five years and typically metastasizes to bones including the vertebra, ribs, skull, femur, pelvis, humerus, tibia, and radius. These patients usually have systemic symptoms including weight loss, fever, generalized pain and anemia. Radiographically, the lesions in bone have a permeative, destructive pattern typically in the metaphyseal portion of long bones. Histologically, the characteristic feature of the neuroblastoma is a rosette formation associated with neurofibrils. However, on routine H&E stains, the histology is quite similar to that of rhabdomyosarcoma, non-Hodgkin's lymphoma and Ewing's sarcoma. Diagnostic studies include cytogenetics that will reveal a chromosomal abnormality in the number 1 chromosome. A CT scan of the abdomen will frequently pick up a neoplastic abnormality in the kidneys. Chemotherapy and sometimes bone marrow transplantation are used in the treatment protocol for this aggressive, extensively metastatic disease but with only a 20-25 per cent chance of survival at five years.