

Hemorrhagic or Telangiectatic Osteosarcoma

The hemorrhagic osteosarcoma (OGS), an extremely lytic and hemorrhagic variant of the osteosarcoma, presents in the same age group and location as a classic osteosarcoma but has a radiographic appearance almost identical to that of an aggressive aneurysmal bone cyst, making for a very difficult differential consideration for the radiologist. At the time of biopsy the tumor is very hemorrhagic and has the gross appearance of an aneurysmal bone cyst. Even microscopically, many areas of the hemorrhagic OGS will have the appearance of an aneurysmal bone cyst with only an occasional mitotic figure. For this reason, it is very important for the surgeon who performs the biopsy to obtain an adequate specimen with good sampling by means of an open biopsy rather than a simple needle biopsy. The microscopic feature of the hemorrhagic OGS is a large number of benign-appearing giant cells and thus the terminology "giant cell rich" osteosarcoma that is used by many pathologists. There is very little evidence of osteoblastic activity in the hemorrhagic OGS and, because it is so lytic in character, it frequently presents with a pathological fracture early in the course of the disease and with that can come problems due to major contamination that occurs during the fracture. Because of the possible complications, an early limb salvage procedure before the fracture occurs should be considered.

It was once felt that the prognosis for the hemorrhagic OGS was worse than that of the classic OGS because of its lytic destructive nature. However, since the advent of systemic chemotherapy, the prognosis for survival is no different than for a classic OGS.