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**Clinical diagnosis and treatment of easy-to-misdiagnosis  
telangiectatic osteosarcoma**

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**Abstract:**

**Background:** Telangiectatic osteosarcoma was reported by Matsuno In 1976, which described that the diagnosis of telangiectatic osteosarcoma was difficult sometimes and the prognosis was poor. According to the current study, among osteosarcoma patients, the ratio of telangiectatic osteosarcoma is about 2%~12%. However, the clinical, radiological and pathological characteristic of telangiectatic osteosarcoma has not been fully elucidated, which may lead to misdiagnosis and inappropriate treatment.

**Purposes:** To investigate the clinical, radiological and pathological characteristic of telangiectatic osteosarcoma and factors that affect the prognosis.

**Patients and Methods:** 28 cases of telangiectatic osteosarcoma confirmed by pathology from 2001 to 2011 were analyzed retrospectively and the clinical, radiological and pathological characteristic was analyzed. These cases were followed up.

**Results:** 28 of 512 osteosarcoma patients were diagnosed as telangiectatic osteosarcoma (5.5%), included 17 male and 11 female patients. Their average age was 18.7 years old. The locations of lesions were femur (16 cases), proximal humerus (3 cases), tibia (7 cases), fibula (2 cases). 6 cases had lung metastasis and 8 cases had pathologic fracture at first visit. Limb salvage surgery was performed in 15 patients and amputation surgery was performed in 13 patients. Among 24 patients followed up, 13 cases acquired disease-free survival, 10 died of lung or other sites metastasis and one survived with tumor. In this group, the radiological characteristic was expansive or osteolytic bony destruction and multiple cyst cavity with different proportion of solid soft tissue. The lesions had ill-defined margin without sclerotic margin. There were often local bone cortex destruction and soft tissue mass formation, but little tumor bone formation. Pathological examination showed cavities with blood cells like aneurysmal bone cyst, but there were tumor cells on the wall of cyst cavities and a little tumor bone formation.

**Conclusions:** Telangiectatic osteosarcoma is a rare subtype of osteosarcoma. Combination of clinical characteristic, radiological and pathological examination can help improve the clinical diagnosis rate. Because of preoperative pathologic fracture and fast progression, telangiectatic osteosarcoma has a higher amputation rate than other subtypes of osteosarcoma. Degree of malignancy, lung metastasis and sensitivity to chemotherapy are main factors that affect the prognosis of telangiectatic osteosarcoma.