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CLINICAL OUTCOME OF PERIOSTEAL OSTEOSARCOMA: A SINGLE INSTITUTIONAL STUDY

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Objective
Periosteal osteosarcoma is a rare, nonmedullary chondroblastic osteosarcoma arising on the surface of long bones. They account for 1-2% of all osteosarcoma patients. Treatment is by surgical excision but the role of chemotherapy is still controversial due to their rarity. We retrospectively reviewed the clinical outcome of periosteal osteosarcoma treated at our institute.

Methods
We identified out of 370 osteosarcoma patients treated at our institute between 1970 and 2014, 8 patients (2.2%) with periosteal osteosarcoma. Gender was male 2, female 6; age at presentation was 12-53 years (median 18.5 years); site of tumor was tibia 5, femur 3. All patients were treated with wide resection surgery. Chemotherapy with regimen of conventional osteosarcoma was administered to all patients. Follow-up period was 40-213 months (median 82 months).

Results
At last follow-up, the clinical outcome was CDF 5, NED 1, DOD 2. The two patients who died, one had lung metastasis at initial presentation, and one discontinued chemotherapy after one course due to malaise and age (53 years). One patient who had recurrence did not receive chemotherapy initially due to pregnancy at diagnosis. Local recurrence, bone and lung metastasis were observed at 6 months. She was then treated with chemotherapy, amputation and metastasectomy. She is presently disease free for 111 months.

Conclusion
Patients with periosteal osteosarcoma had good outcome when treated with surgery and chemotherapy. Due to the rarity of periosteal osteosarcoma, a multi-institutional study is needed to clarify the role of chemotherapy in treatment of this tumor.