Clinical and radiographic presentation of pelvic sarcoma in children

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Abstract:

Introduction: Pelvic sarcomas may present with vague symptoms. The aim of this study was to examine the characteristics and clinical presentations of different types of pelvic sarcoma in children. Methods: This is a retrospective cohort study of patients up to 21 years of age with the diagnosis of pelvic sarcoma between January 2000 and June 2013. Data on demographics, tumor type and location, and clinical presentation were collected from the medical records. Results: A total of 59 patients [37 males (62.7%) and 22 females (37.3%)] were examined in this study. Mean age at presentation was 11.3 ± 5 years (range 0.8–21 years). Thirty-six patients had Ewing sarcoma (61%), 9 osteosarcoma (6.8%), 4 undifferentiated sarcoma (6.8%), 2 (3.4%) rhabdomyosarcoma, 2 synovial cell sarcoma, and one (1.7%) of each fibrosarcoma, dermatofibrosarcoma, fibromyxoid sarcoma, chondrosarcoma, chordoma, and epithelioid sarcoma. Pain at presentation was reported in 41 patients, 13 mass, 8 limping, and 5 neurologic symptoms. Most of the bony tumors were painful (77%), while most of the soft tissue tumors were painless (70%). Nine patients presented with constitutional symptoms. Most patients presented within 4–12 months from symptoms beginning. Twenty-one patients (35.6%) presented with metastases (14 Ewing sarcoma, 6 osteosarcoma, and 1 synovial cell sarcoma). Pelvic radiographs showed lytic lesion in 11 patients, 4 sclerotic lesions, 6 mixed lesion, 6 had only soft tissue mass, 1 radiograph showed osteopenia, and 2 radiographs were reported normal. Conclusion: Ewing sarcoma was the most common pelvic sarcoma tumor in children. In most cases, pelvic sarcoma in children presented with pain mimicking other benign conditions. Some patients presented with metastatic disease with no prognostic clinical or radiographical signs or symptoms. Pelvic sarcoma should be considered a differential diagnosis as part of children work up.

Keywords:

Pelvic sarcoma, Ewing Sarcoma, Osteosarcoma, Undifferentiated sarcoma, Rhabdomyosarcoma, Synovial cell sarcoma, Fibrosarcoma, Dermatofibrosarcoma, Fibromyxoid sarcoma, Chondrosarcoma, Chordoma and epithelioid sarcoma, Lytic lesion, Sclerotic lesion

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