Chronic Myeloid Leukemia with Osteolytic Bone Involvement

Sir,

Chronic myeloid leukemia (CML) is myeloproliferative clonal disorder of stem cell. It has a specific cytogenetic abnormality, the Philadelphia (Ph) chromosome. Extramedullary disease during chronic phase and blast crisis has been documented. Bone involvement in chronic phase is usually considered an impending blast crisis.

A 34 years male presented with weakness, fatigue and abdominal swelling. On examination, spleen was palpable four centimeter below costal margin. Rest of the systemic examination was normal. Hemogram showed hemoglobin 11g%, total leucocyte count 38000/cumm, myelocytes 4%, metamyelocytes 5%, basophils 1%, neutrophils 59%, lymphocytes 28%. Bone marrow examination aspiration was reported.

As chronic myeloid leukemia in chronic phase. Cytogenetic study was positive for philadelphia chromosome. Ultrasound abdomen showed slenomegalgy. X-ray chest, biochemistry and ECG study were normal.

Patient refused bone marrow transplant and interferon therapy. He was started on hydroxyurea. For next two year on follow up, his total leucocyte count was consistently around 25000/cumm. There was progression of disease as indicated by increase in spleen size (2 centemeter below costal margin) and increase in immature cells in peripheral smear. Two years later he developed pain in the lower part of the thigh on right side above knee joint on medial side. He had tenderness in right femur above medial condyle. X-ray right femur showed lytic lesion above medial condyle (Fig. 1). FNAC done from the lytic lesion showed myeloid series cells at various maturation stages (myelocyte, metamyelocyte and basophil). His spleen was palpable six centimeter below costal margin. Haemogram, bone marrow aspiration and cytogenetic study done subsequently was reported as CML in chronic phase. As pain persisted he was started on local radiotherapy 20 Gy in five fractions. He was relieved of pain after radiotherapy treatment. He is on follow up for more than six months. His hemogram, bone marrow and cytogenetic study are in chronic phase.

Chronic phase and blast crisis, both phases of CML are known to have extramedullary involvement. During chronic phase cells of CML involve spleen and liver. Pulp cords of spleen are predominantly infiltrated. Prominence of malpigian corpuscles diminishes as the disease progresses. Foci of myelopoiesis may be seen in sinusoids. Leukemic cell collection may also be seen in hepatic sinuses. CML in chronic phase can very rarely cause destructive bone lesions. Osteolytic lesions in CML seems to signify an unfavourable prognosis. They usually occur slightly before or even at the same time of blastic transformation of disease. Lytic lesions in patients with CML could be metastatic lesion from a co-existing solid tumour, so they should be investigated. Lytic lesions occurring in blastic transformation can be associated with hypercalcemia. Blastic transformation can be late and pain due to lytic lesions can be palliated by radiotherapy as observed in our patient.

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REFERENCES