

# Case Report: Gallium Study Showing a Rare Form of Multiple Myeloma

Edward Meyers and Jay R. Kasner

Good Samaritan Medical Center, Deaconess Hospital Campus, Milwaukee, Wisconsin

Multiple myeloma is characterized by scattered, focal, destructive lesions of bone. It usually affects people from ages 60 to 80 with a higher incidence in men than in women. The etiology of the disease is unknown (1). In approximately 70% of the cases of multiple myeloma, there is soft tissue infiltration (2). Before 1951, however, only 20 cases of pulmonary involvement of the disease were recorded (3). From 1951 to the present, we found no cases of pulmonary involvement recorded. We also found no cases in the literature from 1979 to the present where a gallium scan was performed on a patient with soft tissue infiltration by multiple myeloma. We describe such a case.

A 62-year-old white woman presented with neck swelling. This was diagnosed on admission as superior vena caval syndrome. A chest x-ray demonstrated a symmetrical widening of the mediastinum. This finding represented a marked change from a chest x-ray performed two months previously. Admission CBC was within normal limits except for a hemoglobin of 9.1 g/dl. A CT scan of the superior mediastinum and lower neck demonstrated an extensive anterior mediastinal mass, as well as a left pleural effusion. A bone marrow aspirate was obtained; it revealed diffuse, malignant, plasma cell infiltrate consistent with multiple myeloma. Serum protein electrophoresis showed a monoclonal spike in the gamma portion. The gallium scan, using 3 mCi of Ga-67 citrate, demonstrated findings in the anterior mediastinum, pericardium, and/or myocardium, as well as in the left lung base consistent with a neoplastic process. These findings appeared at 24 hr and persisted through 72 hr at which time the study was terminated. Subsequent resting cardiac blood pool images suggested normal left ventricular function, which indicated pericardial rather than myocardial involvement. A mediastinal biopsy was subsequently performed; this also demonstrated a malignant infiltrate consistent with multiple myeloma. The patient expired a short time later; no postmortem examination was performed.

For reprints contact: Edward Meyers, Good Samaritan Medical Center, Deaconess Hospital Campus, 620 North 19th St., Milwaukee, WI 53233.

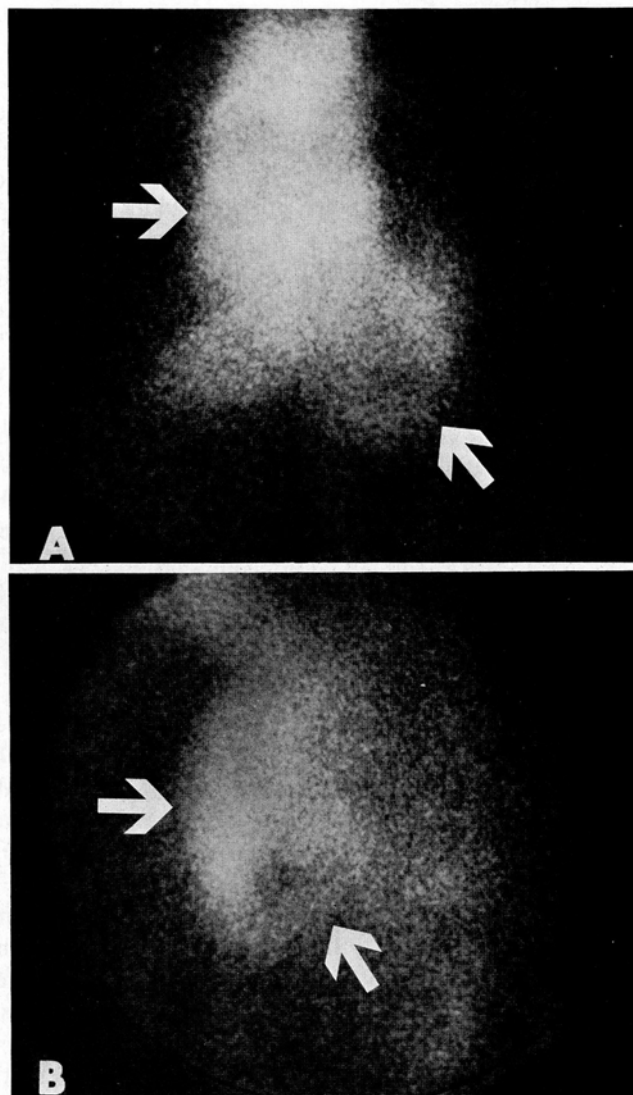


FIG. 1. Anterior (A) and left lateral (B) images of chest showing accumulation of gallium in mediastinum and pericardium.

## References

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