Value of Shoulder MRI in Cancer Patients Presenting with Shoulder-Related Symptoms

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Conclusion:

MRI of the shoulder plays a role in validation of suspected shoulder metastasis seen on other imaging modalities. However, MRI of the shoulder has low diagnostic yield for the initial detection of de-novo shoulder metastasis in cancer patients greater than 65-years-old.

Introduction

• In cancer patients more than 65-years-old presenting with shoulder-related complaints, clinicians often use MRI of the shoulder to detect de-novo metastasis. However, the diagnostic yield of MRI in these patients is not known.
• In this project, we evaluate the diagnostic yield from MRI of the shoulder requested for cancer patients more than 65-years old presenting with shoulder-related symptoms.

Methods and Materials

• We retrospectively reviewed 306 consecutive shoulder MRI scans that were performed at our institution for cancer patients more than 65-years-old who presented with shoulder-related symptoms.
• Patient's primary diagnosis, symptoms, and previous imaging data was collected. Patients with primary shoulder tumors were excluded.

Results

• Of 306 patients, 20 were excluded as they had primary tumor of the shoulder. In the remaining 286 patients, MRI showed internal derangement in 162 (57%) patients.
• 46 (16%) patients had metastatic disease to the shoulder. Of these, 29 were initially suspected on other imaging modalities.
• Of the whole population, MRI of the shoulder showed de-novo metastasis in 17 (5.9%) patients. In this group, 13 patients had documented metastatic disease in other anatomical locations.
• In patients without known prior metastatic disease, 4 (2%) patients had newly detected shoulder metastasis as the cause of their symptomatology.

The flow chart above depicts the results of the study.

Dr. Mujtaba is focused on the use of appropriate imaging studies in order to diagnose and to help manage patients with neoplasms affecting the musculoskeletal system.