

more, potent inhibition of the target by aromatic sulphonamides is well understood, allowing the rational design of such carrier sulphonamides (5 and references therein). In vitro incubation of whole human blood with radioiodinated pIBS gives quantitative uptake by red cells in less than 1 min at 37°C. In vivo administration of the radiopharmaceutical, involving a single intravenous injection, is just as effective, and it clears from the blood at least eight times more slowly than the standard technetium-red cell label. Consequently, blood-pool images can be obtained using far less activity and over longer periods than are routinely employed for ^{99m}Tc ; moreover, the problems that are now occasionally encountered with patients on medication are unlikely to arise when using this selective approach.

While ^{123}I has excellent imaging properties and [^{123}I]pIBS is amenable to kit preparation, the cost and limited availability of the radionuclide vitiates its use in routine blood cell labeling. However, a combination of our approach with the use of ^{99m}Tc would present an ideal short-term blood-pool imaging agent. We recently have been investigating ^{99m}Tc -propyleneamineoxime derivatized sulphonamides in this regard (6), and other preliminary studies in this area have been reported by Subramanian and co-workers (7). Unfortunately our results have not yet matched those with radioiodinated pIBS, since there is significant plasma binding of the technetium complexes; however, an equally efficacious agent should eventually emerge.

The simplicity of the protocol, the selectivity of the carrier, and its persistent retention suggests that the enzyme-inhibitor approach to red cell labeling will not only be of value to short-term studies but could also offer significant advantages to longer term studies such as the determination of in vivo red cell survival.

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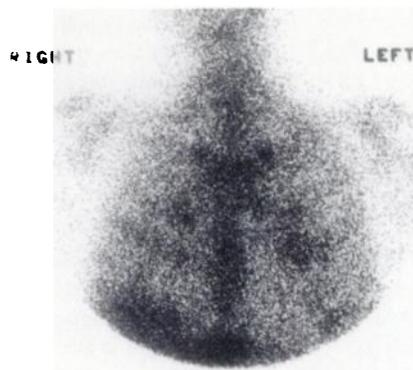


FIGURE 1. Anterior ^{67}Ga -citrate scan showing increased lung uptake and absence of deltoid muscle uptake.

Gallium Uptake in Eosinophilia Myalgia Syndrome

TO THE EDITOR: In a recent case report on gallium uptake in eosinophilia myalgia syndrome (EMS), Kim et al. (1) reported gallium lung uptake but absence of uptake in the muscle. The authors attributed the lack of muscle uptake to prior steroid therapy. We wish to report a patient with EMS, who had positive muscle biopsy but failed to take up gallium at that site even though he was not on steroid therapy.

A 64-yr-old male presented with fatigue, myalgia, muscle cramps, and swelling of his extremities. Examination showed non-pitting edema in the extremities and morbilliform rash on the abdomen. He had been taking L-tryptophan for 6 mo for insomnia. Laboratory data revealed increased sedimentation rate and absolute eosinophilia of $1170/\text{mm}^3$. Chest x-ray demonstrated bi-basilar reticular infiltrates. A gallium lung scan showed bilateral basal uptake and normal uptake in the deltoid muscles (Fig. 1).

Muscle biopsies from both deltoid areas (including skin and fascia) were compatible with eosinophilic fasciitis and EMS. Open lung biopsy showed diffuse interstitial fibrosis (desquamative interstitial pneumonia). This case points to the nonspecificity of gallium lung uptake and the need to pursue tissue diagnosis. Absence of gallium muscle uptake, as seen in this case, may be a feature of this disorder.

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REPLY: We wish to thank Dr. Rao et al. for their comments on our recent paper (1).

Before responding to their letter, we must note that we had difficulty in understanding their description of Figure 1, which they described as "bilateral basal uptake," though the image shown does not have increased uptake at the bases. In addition,