Gallium-67 lymph node localization in toxic Kikuchi-Fujimoto's disease

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More than 200 cases of Kikuchi-Fujimoto's disease (KFD) have been reported worldwide. It appears to be an increasing prevalence amongst Asians. Few cases have been reported in the Gulf countries and females are more affected than males. The disease is usually benign and of is unknown and controversial etiology. Cervical lymphadenopathy is the predominant clinical feature with high grade fever, systemic symptoms and low white blood cells (WBC) occurring in approximately half of the patients.[1-4] Histological examination of a lymph node confirms the diagnosis and excludes lymphoma which is often suspected clinically at presentation. It is more difficult to distinguish between the lymphadenopathy that occurs in a small proportion of patients presenting with systemic lupus erythematosus (SLE), indeed the disease may co-exist. Long life follow-up is the rule as KFD may recur and patients have been reported who developed SLE years later.[3,5]

A 17-year-old Omani male, previously perfectly well, was admitted with one month history of high grade continuous fever associated with night sweats, rigors and mild headache. He had never traveled abroad and there were no other relevant symptoms. Physical examination revealed a sick looking young male with very high temperature of 39-40^{0}C, and an enlarged cervical lymph nodes 2-3 cm in size, discrete, firm and tender. There was a few small axillary lymph nodes but no other clinical abnormalities. Investigations revealed hemoglobin 12.4 g/dl, WBC 2.1 x 10^{9} d/L, platelets 229 x 10^{9} g/L and the film revealed atypical reactive lymphocytes. The erythrocyte sedimentation rate (ESR) 45 mm/hour and C-reactive protein 322, (N <90) were elevated, and the antinuclear antibody was detectable in a low titer of 1:40. Gallium-67 (67Ga) scintigraphy revealed uptake confined to the right neck mass **Figure 1.** Rheumatoid factor and anti-DNA antibodies were absent and C3 and C4 complement levels were normal. Serial blood and urine cultures were negative as the Mantoux and antibodies against typhoid, brucella, toxoplasma, cytomegalovirus and human immunodeficiency virus. Liver function and electrolytes were normal as well as the chest x-ray, abdominal ultrasound, echocardiogram. Treatment was started with ceftriaxone 2 gm daily but the fever persisted. Over the next week, there was progressive tender lymph node enlargement. A biopsy was obtained which revealed KFD without evidence of lymphoma or granulomata. The ceftriaxone was stopped and prednisolone 40 mg once a day was started. There was an immediate fall in temperature **Figure 2**. The WBC increased within 4 days and the lymph nodes disappeared after 3 weeks. On discharge, the prednisolone was reduced slowly and discontinued after 3 months. At follow-up, 67Ga scan was normal at 4 months. This is the first report of KFD in an Omani patient. Although this disorder is usually self-limiting, approximately half of the patients have high grade fever and tender cervical lymphadenopathy. Surprisingly there are no reports of the use of gallium or steroids in patients with KFD uncomplicated by SLE. Gallium-67 scintigraphy confirmed involvement of cervical lymph nodes only, making the diagnosis of KFD rather than lymphoma or SLE most likely. Our patient was toxic, anorexic, unable to swallow and with persistent high-grade fever and progressive tender glandular enlargement. He started prednisolone and made a prompt recovery. At the time of writing, 10 months after starting the treatment, he is clinically and biochemically normal, with a negative gallium scan and stopped all medication. As KFD may recur and is associated with

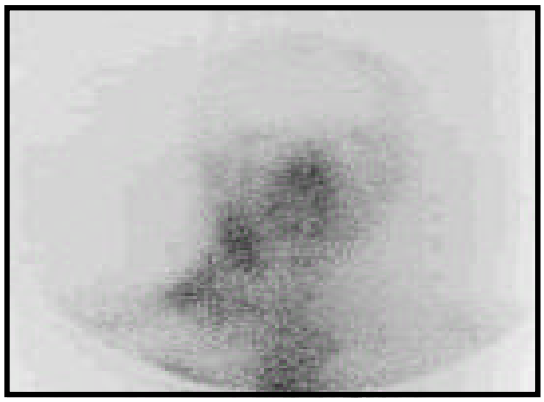

Figure 1 - Gallium-67 scintigraphy showing the right neck mass.

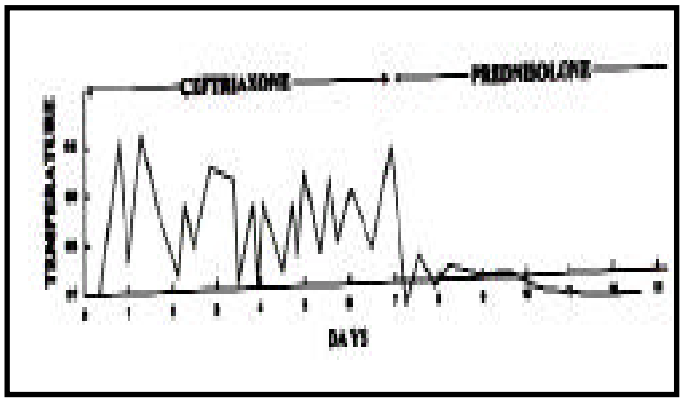

Figure 2 - Fall in temperature after starting treament with prednisolone.

the development of SLE in a small proportion of patients, life long follow up will be necessary.

In conclusion, clinicians should consider the diagnosis of KFD disease in patients with unexplained cervical lymphadenopathy particularly if gallium scanning reveals diseases localized to the neck. High dose steroid therapy may be used to have a good effect in patients who are systemically ill with high-grade fever.

Received 21st August 2002. Accepted for publication in final form 31st December 2002.

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Title: The role of Gallium-67 whole body scintigraphy in secondary infections in HIV- positive patients

Source: Saudi Med J 1997; 18: 480-484

Abstract

Secondary infections in HIV-positive patients are a major cause of morbidity and mortality. Early diagnosis of these secondary infections is the key to successful treatment and survival. The role of ^{67}Ga citrate scintigraphy is established as a screening method for opportunistic pneumonia. However, few reports have focused on abdominal ^{67}Ga imaging and there have been none from the Middle East. **Objectives:** This study was designed to assess the role of ^{67}Ga citrate whole body scintigraphy (^{67}Ga WBS) for detection of secondary infections in symptomatic and asymptomatic HIV-positive patients. **Methods:** Thirty-one ^{67}Ga WBs studies were performed on 28 HIV-positive patients; of whom 7 were asymptomatic and 21 were symptomatic. **Results:** ^{67}Ga WBS studies were normal in the 7 asymptomatic patients. Abnormal ^{67}Ga WBS studies were obtained in 9 patients with myocobacteria, in 4 with 67 *Pneumoncystis carinii*, and in 6 with other organisms. ^{67}Ga WBS studies were normal in 3 patients with *Salmonella* infection. In the symptomatic group as a whole, 18 (75%) showed abnormal abdominal uptake whereas only 12 (50%) showed abnormal chest uptake. ^{67}Ga WBS detects more lesions than ^{67}Ga thorax scintigraphy only. **Conclusions:** In this series the sensitivity and specificity of ^{67}Ga WBS for the detection of abdominal sites of secondary infections were 84% and 83% respectively, the positive predictive value was 88%, the negative predictive value was 70% and the accuracy was 81%. The examination is very useful in localizing the sites of infections in symptomatic patients.