

ORTHOPAEDIC APPLICATIONS OF SCINTIMETRIC CHARACTERIZATION BY DR V SIVA'S RETENTION RATIO

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The scintimetric characterization of the skeletal hot spots by the Dr V Siva's retention ratio had been reported in the differentiation of benign lesions from the metastatic ones in the case of carcinoma prostate primarily. The routine bone scan was done 4 hours after the intravenous injection of 20 to 25 mCi of Tc-99m MDP. In the case of those patients with detectable skeletal hotspots, the scan repeated 24 hours post-injection time next day. The maximum counts at the hot spot were calculated in the 4 hr and 24 hr scan images. The Dr V Siva's retention ratio was calculated by dividing the 4 hr counts by 24 hr counts. Israel's ratio obtained by the division of 24-hour lesion/non-lesion ratio with the 4 hr lesion/non-lesion ratio was decimal in nature. Our Dr V Siva's retention ratio was the full integer. Hence useful classification range was established. The Benign lesions had the value ≤ 5 . The degenerative and traumatic lesions had the intermediate range of 5-10. The malignant metastatic range was found to be 10 and above. The same had been found to be useful in the evaluation of causes of a delayed union of fractures. The utility of this method in the characterization and evaluation of the rheumatoid arthritis patients had also been documented. The addition of scintimetric characterization of fracture site by Dr V Siva's retention ratio along with the triple-phase bone scan findings helps in the proper identification of the underlying pathological process clearly had been documented. The scope and applicability of the scintimetric characterization by Dr V Siva's retention ratio in the evaluation of skeletal trauma, infections, sports related injuries and solitary skeletal neoplastic conditions will be discussed emphasizing the need for further exploration of this technique to confirm its authenticity

Biography

V Siva Subramaniyan is a Doctoral Research Scholar pursuing his research in the area of Scintimetric characterization in the University SSSIHL, Prasanthinilayam under the guidance of Prof K Venkataramaniah. He is a Senior Radiologist, Consultant Nuclear Medicine Physician and Imaging Specialist. He was awarded Dr Ashok Mukherjee Gold Medal for the best young Radiologist of the country in the year 1999 for his research work by the Indian Radiological and Imaging Association-IRIA. He was invited to present his research work as Poster in the IPET 2015 organized by IAEA at Vienna. He is pursuing his research and academic work. He has delivered more than 75 presentations, 9 thesis guidance and 10 publications to his credit.

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