

QuantitationinNuclearMedicine

Thequantificationof functionandactivity playsanimportantrole clinicallyinnuclearmedicine. Examplesincludethe analysisof tracerkineticstoquantifydynamicfunction, thedetermination ofthefractionofthecardiacbloodpooledduringcontraction, thecomparisonof regional localizationofuptake withint heheart tothatofadata base to facilitate therecognitionof perfusiondefect sincardiacy imaging , and thelocalizationofF-18labeled FDGin potential lesions. Despitethepresentclinicalutilityofquantificationanumber of factors limitcurrent methods.Thesuccessfuladdressingofthese factors would expandthe clinical utility of quantificationandare thesubject ofcurrentandfutureinvestigations.

Thislecturewillprovide anintroductionto theapplicationofquantificationwithinnuclear medicine.Itwillpointoutsome currentdeficiencies,andpotentialresearchdirectionsaime dat overcomingthem.

EducationalObjectives:

1. Understand thevarious types ofquantification employedin nuclearmedicine
2. Recognizesome ofthelimitationstorobust applicationofquantificationclinically
3. Appreciate some ofthepr oposedmethodstoovercometheselimitations