Functional Lung Ventilation Imaging

Using 99mTc-Technegas may assist in monitoring and assessing treatment response in patients with lifelong asthma.

HISTORY
Lifelong Asthma

IMAGING PROTOCOL
LUNG VENTILATION SPECT/CT with Technegas

REFERRAL
Query ASTHMA treatment efficacy

DIAGNOSIS
In this patient with asthma, bronchoconstriction after methacholine challenge worsened ventilation function and increased ventilation heterogeneity. This was predicted by baseline peripheral ventilation heterogeneity. After treatment, ventilation improved and is more homogeneous on ventilation SPECT imaging.

PATIENT 1
AGE: 25      SEX: M

BASELINE

METHACHOLINE

BEFORE TREATMENT

AFTER TREATMENT

In this second patient with asthma, bronchoconstriction after methacholine challenge also worsened ventilation function and increased ventilation heterogeneity. Despite optimal treatment, no improvement was measured on ventilation SPECT imaging, neither at baseline nor after methacholine challenge.

PATIENT 2
AGE: 24      SEX: M

BASELINE

METHACHOLINE

BEFORE TREATMENT

AFTER TREATMENT

Images and data were kindly provided by the Woolcock Institute of Medical Research.

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