POLICY FOR PULMONARY EMBOLUS IMAGING DURING PREGNANCY

For pregnant patients with clinical concern for PE and a normal or near normal chest radiograph, V/Q is preferred over pulmonary CTA. Pulmonary CTA is recommended if the patient has an abnormal chest radiograph, history of PE diagnosed by CTA, or a history of DVT. If the patient has a history of PE diagnosed by V/Q scan, imaging with a V/Q scan is recommended.

The fetal radiation dose is low for both CTA and V/Q, but the amount of radiation to the maternal breast, which is more radiosensitive during pregnancy, is far lower with V/Q. V/Q can decrease radiation burden to the maternal breast by 95% compared with pulmonary CTA. For V/Q scans, the administered radiation dose for both the ventilation and perfusion components is reduced by 50% in pregnant patients. We adjust for this by scanning twice as long in order to provide a diagnostic quality exam.

The Aurora protocol for nuclear medicine lung scans during pregnancy includes both ventilation and perfusion scans. Pregnant patients often have significant soft tissue artifact on the perfusion scan that can be more reliably differentiated from true perfusion defects when ventilation images are available. Having both the ventilation and perfusion components for interpretation increases reader confidence and results in a lower percentage of indeterminate results than perfusion only scans. Therefore, per the Aurora Nuclear Medicine COE consensus, all lung scintigraphy exams performed on pregnant patients must include both ventilation and perfusion components. Due to the ventilation agent we use, it is not possible to do a perfusion scan first and the ventilation scan afterward.

References:


