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Specialty : Cardiovascular
Lecture Title : DVT Ultrasound in Stroke : A Step-by-Step Practical Approach
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Title: DVT Ultrasound in Stroke: A Step-by-Step Practical Approach
Background: Deep vein thrombosis (DVT) is a critical complication in stroke patients, with an incidence of approximately 7.4% within the first week of admission according to recent meta-analyses (IRIS-DVT 2025). Due to sensory deficits and motor paralysis, over 60% of these cases are clinically "silent," making timely and accurate ultrasound diagnosis essential for preventing fatal pulmonary embolism (PE).
Objectives: This lecture aims to provide a comprehensive, step-by-step practical guide for radiologists to optimize DVT screening and diagnosis in the stroke unit. It incorporates the latest 2026 AHA/ASA guidelines, which emphasize early screening within 72 hours for high-risk patients (NIHSS ≥ 15 or complete hemiplegia).
Practical Approach & Methodology:
Standardized Protocol: We present a structured scanning sequence from the common femoral vein to the trifurcation of the popliteal vein, with a specific focus on the "Stroke Zone"—the mid-to-distal superficial femoral vein (SFV)—where isolated thrombi frequently occur due to static pressure.
Diagnostic Criteria: The gold standard of "complete incompressibility" is reviewed alongside secondary signs such as abnormal Doppler phasicity and venous distension.
Overcoming Technical Pitfalls: We discuss specialized techniques for challenging cases, including:
Differentiating acute vs. chronic thrombi using the "Spongy Sign" and vein diameter measurements.
Utilizing low-frequency convex probes (2-5 MHz) and dual-hand compression to overcome severe limb edema.
Identifying "Pseudo-DVT" mimics such as ruptured Baker's cysts and cellulitis.
Conclusion: A proactive, step-by-step approach to ultrasound allows for the early detection of asymptomatic DVT in stroke patients. By mastering specific technical maneuvers and adhering to updated screening guidelines, radiologists play a pivotal role in reducing VTE-related morbidity and mortality in the stroke population.