phlegmasia cerulea dolens

Phlegmasia cerulea dolens (PCD) is a **rare, limb- and life-threatening emergency** caused by massive deep-vein thrombosis. It means “painful blue inflammation”: a leg (less often an arm) becomes rapidly swollen, severely painful, and blue/purple because venous drainage is almost completely blocked. [1] [2]

Why it is dangerous

The extensive clot burden raises pressure in the limb, causing major swelling and congestion. That pressure can eventually compress arteries, reducing arterial blood flow and leading to tissue ischemia, compartment syndrome, venous gangrene, limb loss, pulmonary embolism, and potentially shock. [3] [4] [2]

Typical signs

The classic triad is:

- **Sudden, severe pain** in the limb. [5] [1]
- **Rapid, marked swelling.** [1] [2]
- **Blue, purple, or dusky skin color** (cyanosis), often with coolness, blisters, or numbness/tingling as it progresses. [1] [2]

A related, generally earlier form is **phlegmasia alba dolens**, where the limb may look pale or white rather than blue; it can progress to PCD. [1] [6]

What to do

Call 911 / go to the ER immediately if an arm or leg is severely swollen, blue/purple, or painful—especially if this developed suddenly, or if there are blisters, cold skin, numbness, or signs of shock. Do not wait to see whether it improves. [1] [2]

Possible warning signs of a pulmonary embolism—such as sudden shortness of breath, chest pain, coughing blood, fainting, or a fast heartbeat—also require emergency care. [2]

Diagnosis and treatment

In the emergency department, clinicians usually perform an urgent Doppler/duplex ultrasound and assess circulation and compartment pressure; CT venography or other imaging may be used. [4] [2] [6]

Treatment is urgent and commonly includes:

- **IV anticoagulation**, often heparin, to stop clot extension. [4] [2]
- **Clot-removal procedures**, such as catheter-directed thrombolysis or mechanical/surgical thrombectomy, particularly when the limb is threatened. [4] [2]
- **Treatment of the underlying cause**, which may include venous stenting or angioplasty—for example, in May-Thurner syndrome. [2]
- **Compartment-pressure monitoring or fasciotomy** if compartment syndrome develops. [3] [7]

PCD is much more severe than an ordinary DVT because it involves near-total obstruction of both deep and collateral venous outflow, not merely a single clotted vein. [4] [7]

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1. https://medlineplus.gov/ency/article/000200.htm
2. https://my.clevelandclinic.org/health/diseases/24747-phlegmasia-cerulea-dolens
3. https://pubmed.ncbi.nlm.nih.gov/42258665/
4. https://pmc.ncbi.nlm.nih.gov/articles/PMC4401948/
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