Filler vascular occlusion: the first hour

Suresult

Treatment-room protocol from CMAC 2021, the ACE Group 2020, the 2025 Delphi consensus, WFUMB 2025 and the 2026 UK vision-loss consensus

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Recognize

Signs, in order (ACE Group): blanching at once; livedo within minutes to tens of minutes; capillary refill over 3 seconds within minutes; a blue-gray cast over tens of minutes to hours.

Capillary refill: press 5 seconds, release, and time the color's return on both sides. Over 3 seconds is a sign of vascular compromise (ACE Group); CMAC calls under 2 seconds normal. A delayed refill points to the artery.

Bruise or occlusion: a bruise does not blanch. Blanching, and a pattern that follows one artery's path, belong to the occlusion. Doppler settles the rest.

Pain is the least reliable sign: lidocaine masks it, and pain away from the injection point is a warning sign of its own.

Treat: the first hour

Treatment starts on the clinical signs, without waiting for imaging.

1. **Stop injecting and look at the whole face.** Check capillary refill on both sides and along the artery's course. Video the area in good light before treatment (CMAC).
2. **Start hyaluronidase.** CMAC infiltrates 1,500 units along the artery's course and across the whole ischemic area. It uses more than one vial for a large area, repeats at least hourly while refill stays over 3 seconds, and treats to effect. The ACE Group adds aspirin 300 mg at once, then 75 mg daily.
3. **Scan as you treat.** Scan the injected area, then the full face (Delphi 2025). Compare each artery with the other side in Color, Power and PW Doppler.
4. **Locate the block.** Follow the artery from the skin sign back to its trunk. The filler sits as an anechoic oval at the base of the trunk (Schelke 2023).
5. **Target it under guidance.** Bring the needle in plane, under a sterile probe cover with sterile gel, into the perivascular space or the deposit. Guided first doses: a mean of 95 IU (Schelke 2023); or 30 IU, then 35–50 IU steps to a maximum of 150 IU in Urso's protocol (Urso 2024).
6. **Rescan at once.** Flow returned in under 60 seconds in Schelke's 39 patients. If the artery stays silent, inject again: in Azizi's nasal case, a second 150 U at 15 minutes brought flow back.
7. **Record.** Save clips, and PSV and RI on both sides before and after treatment; recording is mandatory (Delphi 2025). Name the equipment in the report (WFUMB 2025).
8. **Follow up in person.** Rescan within 24 hours and again at about a week. CMAC reviews every resolved occlusion the next day. The ACE Group gives each patient an out-of-hours number.

Doppler settings for slow facial arteries

- Arteries under the skin peak at 15 cm/s or less (WFUMB 2025).
- Set the Color scale near 3 cm/s (Sigrist 2026), then lower the PRF and the wall filter until the pulsatile signal stands out.
- Switch to Power Doppler for the faintest flow. Use the PW gate to confirm an arterial waveform and read PSV and RI on both sides.
- Keep the probe light, on abundant gel or a gel pad: pressure collapses these vessels.
- Veins compress under the probe. A blocked artery stays a noncompressible tube.

Vision loss: transfer first

Vision loss most often begins immediately or within 10 minutes of the injection. CMAC cites retinal infarction within 12 to 15 minutes of a complete block.

1. **Stop and transfer.** Send the patient to the nearest emergency department without delay. Keep the department's details printed, go with the patient when possible, and consider phoning ahead (Sansome 2026).
2. **Hyaluronic acid filler: give hyaluronidase only if it does not significantly delay transfer.** The UK consensus allows it where the filler went in, or near the supraorbital notch or the supratrochlear vessels, from a clinician competent in the technique, and gives retrobulbar and peribulbar injection no place. Goodman's consensus injects 1,500 units in 2 mL of 1% lidocaine at the filler site and over any ischemic skin. Send four 1,500 IU vials with the patient (Walker 2021).
3. **While transfer is arranged, and only if they add no delay** (Sansome 2026):
   - ocular massage, 5-second presses with 10 seconds off for up to 5 minutes, with the patient supine at 15–45°;
   - rebreathing into a paper bag, 10 minutes in every 30;
   - one drop of timolol 0.5% in the affected eye;
   - aspirin 300 mg unless contraindicated.
4. **Write down the times:** onset; filler type and amount; site; needle or cannula; signs; every intervention, including treatment after vision loss; the time the ambulance arrived; the first hospital interventions (Walker 2021).

Emergency kit checklist

- ☐ **Hyaluronidase:** at least five 1,500 IU vials (7,500 units). CMAC reconstitutes at 1,500 units per mL with local anesthetic without adrenaline. Store below 25 °C and track expiry dates.
- ☐ **Aspirin** 300 mg, chewable
- ☐ **Eye drops:** timolol 0.5%, apraclonidine, bimatoprost
- ☐ **A paper bag** for rebreathing
- ☐ **A Snellen chart app** and a light source
- ☐ **Anaphylaxis and resuscitation kit:** adrenaline; airway, breathing and circulation kit; antihistamines; IV steroids; vasopressors
- ☐ **Printed:** flowcharts, the local emergency department's details, a vision-loss record form
- ☐ **Ultrasound:** a linear probe of at least 15 MHz with Color, Power and PW Doppler, charged and paired, with sterile covers and sterile gel (Delphi 2025; WFUMB 2025). Sterile gel pads for a 4 mm stand-off: EFSUMB 2021 calls for gel pads to keep the superficial vascular plexus uncompressed.

The full guide: Doppler patterns in 100 events, the published hyaluronidase doses for guided and unguided treatment, site risks and sources.

Suresult L20Pro: 16/20 MHz wireless linear probe, 10–40 mm, Color, Power and PW Doppler, 145 g, 4 hours of scanning. **suresultmed.com**

Sources Murray 2021 (CMAC) · King 2020 (ACE Group) · Velthuis 2025 (Delphi) · Chammas 2025 (WFUMB) · Sansome 2026 (UK consensus) · Goodman 2020 · Walker 2021 · Heydenrych 2021 · Sigrist 2026 · Schelke 2023 · Urso 2024 · Azizi 2025 · Alfageme 2021 (EFSUMB)

The full references are listed in the online guide.