

NOTES

(a) Patient and vascular assessment prior to HBOT

- A thorough assessment of the patient must be done prior to acceptance for HBOT, and the decision to treat should not be based on TCOM alone.
- Ensure prior vascular assessment has been done with other arterial testing such as ankle brachial index (ABI), handheld doppler waveform analysis
- For patients with diabetes: skin perfusion pressure, toe brachial index are indicated instead of ABI

(b) TCOM measurement

- TCOM is measured in periwound area: obtain mean values of 2 or more adjacent sites
- Patient should be at rest, in a supine or recumbent position, in a comfortably warm room with the extremity covered by a sheet or blanket
- Standard temperature setting for thermistor is 45 C, may use 44 C for infants or older adults
- Check oxygen saturation at the time of TCOM testing. If SpO2 is ≥ 92%, it can be assumed that arterial hypoxemia is not present, and periwound TCOM values are applicable

(c) Tissue hypoxia

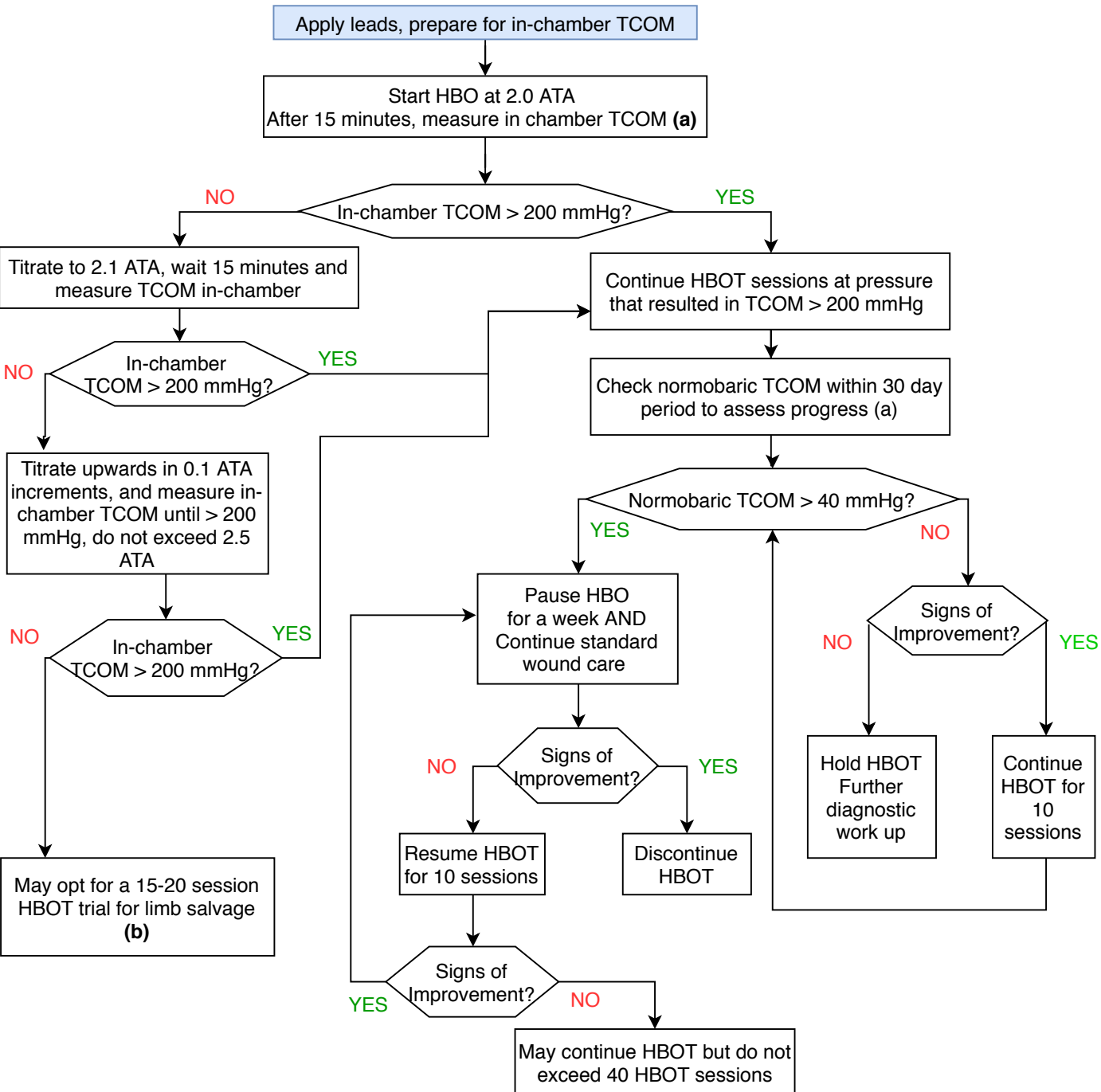
- According to the latest expert panel consensus on TCOM, tissue hypoxia is defined as TcPO2 < 40 mmHg in patients with no diabetes or renal failure
- For patients with TcPO2 < 40 mmHg, ensure there is no edema or vasoconstriction in the measured area, as these can falsely reduce TCOM readings.
- If edema is present, leg elevation and/or compression for 10-15 minutes (if no vascular disease is present) can decrease edema so that TcPO2 can be measured again

(d) HBOT candidates

- TcPO2 < 30 mm Hg on air and >100 mm Hg on 100% oxygen suggests adequate arterial inflow but existence of a local barrier to oxygen diffusion. HBOT is indicated in these cases.

References

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NOTES

(a) TCOM leads: turn off TCOM after each in-chamber measurement, as leads are warm and may damage skin if used for prolonged periods of time

(b) HBOT trial for limb salvage

- Expert consensus states that even in patients with in-chamber values < 100 mm Hg (and thus a low likelihood of HBOT benefit), the accuracy of this test is still only 76%. Thus, a trial of HBOT continues to be a reasonable approach, if there are no other options for the patient, on a case-by-case basis (limb salvage)
- A reasonable trial of HBOT is regarded as 15-20 treatments.

References

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