Preparation for hyperbaric therapy:
- Plans for treatment begin while the patient is still in the ICU, before transport to the hyperbaric chamber is initiated.
- Issues to be addressed include:
  (i) informed consent,
  (ii) determination that all intravenous/arterial lines and nasogastric tubes/Foley catheters are secured,
  (iii) placing all unnecessary intravenous catheters,
  (iv) capping chest tubes to one-way Heimlich valves, and
  (v) adequately sedating or paralyzing the patient as clinically indicated.

Monitoring & equipment issues
- The patient is attached to equipment at ambient pressure before treatment, and once the treatment pressure is achieved all settings are checked and transducers recalibrated.
- Among the items that must be checked is the cuff pressure of endotracheal tubes.
- The usual practice is to replace the air in these cuffs with an equivalent volume of sterile saline before treatment to avoid volume changes related to pressurization.
- If glass bottles, pressure bags, or any other gas-filled equipment are used inside a hyperbaric chamber, they must be adequately vented and closely monitored during a treatment.

(i) Middle ear barotrauma
- Middle ear barotrauma is the most common adverse effect of HBO2 treatment.
- Standard protocols include instruction of patients on autoinsufflation techniques and adding oral or topical decongestants when needed. When autoinsufflation fails, tympanostomy tubes must be placed.

(ii) Pulmonary barotraumas:
- Pulmonary barotrauma during HBO2 treatment is extremely rare but should be suspected when any significant chest or hemodynamic symptoms occur during, or shortly after, decompression.
- Because the offending gas in virtually all cases will be pure O2, absorption within the body may occur. If symptoms do develop, however, decompression should be stopped and the patient evaluated.
- If pneumothorax is suspected, placement of a chest tube is appropriate. Preexisting pneumothorax should be treated with chest tube drainage before initiating therapy.

(iii) Ocular toxicity:
- Progressive myopia has been reported in patients who undergo prolonged daily therapy, but this typically reverses within 6 weeks after termination of treatments.
- Development of nuclear cataracts has been reported with excessive treatments that exceed a total of 150 to 200 hours, and the change does not spontaneously reverse.
- Although there is a theoretical risk for retrolental fibroplasia in neonates, there are no reports of this having occurred.
- Currently, experimental and clinical evidence does not indicate that typical HBO2 therapy protocols have detrimental effects on neonates or the unborn fetus.

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