

Correspondence

Dear Editor:

With reference to the article entitled "Scavenging anesthetic gas from a membrane oxygenator during cardiopulmonary bypass," the author recommends a regulated pressure of -100 mmHg from the wall suction to scavenge waste anesthetic gas from the oxygenator (1).

The British Standards Specifications for active anesthetic gas scavenging systems require that all such devices should have: 1) an independent vacuum source, 2) an air brake in the event of obstruction to flow (Venturi type device), and 3) a visual indicator of flow in the air brake (2). While the above recommendations are applicable to anesthetic equipment, we have applied them as a basis for our oxygenator scavenging device.

Monitoring pressure to scavenging gases is not a satisfactory way to remove waste gases, as pressure is not an indicator of flow. The possibility of cross contamination from the wall vacuum source coupled with the unrestricted vacuum (up to -400 mmHg), should it occur, makes this less than ideal as a scavenging device. Flow into our scavenging system is measured using a Wrights Respirometer (accuracy $\pm 5\%$). Miller, Annis, and Muravchick all recommend a scavenging flow of 2-2.5 times oxygenator gas flow (3, 4, 5). This is approximately 10 l/min using membrane oxygenators. The above recommended system has been operating satisfactorily in our unit for the past year.

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1. Homishak M, Widmer S, Stauffer R. Scavenging anesthetic gas from a membrane oxygenator during cardiopulmonary bypass. *J Extra-Corpor Technol.* 1996; 28(2): 88-90.
2. British Standard Specification for Active Anaesthetic Gas Scavenging Systems. Publication No. BS6834. 1987, British Standard Institute, 2 Park Street, London W1A 2BS, England.
3. Miller JD. A device for the removal of waste anesthetic gases from the extracorporeal oxygenator. *Anesthesiology.* 1976; 44(2): 181-182.
4. Annis JP, Carlson DA, Simmins DH. Scavenging system for the Harvey blood oxygenator. *Anesthesiology.* 1976; 45(3) 359-360.
5. Muravchick S. Scavenging enflurane from the extracorporeal pump oxygenator. *Anesthesiology.* 1977; 47(5): 468-471.