An easy solution to obstructed sampling line: Auxillary oxygen flowmeter

Sir,

This is with reference to the correspondence by Nataraj Madagondapalli Srinivasan, “Use of heat and moisture exchanger in intubated patients reduces blockage in gas sampling tube of the mass spectrometer,”[1] in the Jan–Mar 2011 issue of the Saudi Journal of Anaesthesia. We read it with interest as it discusses a rather common problem.

Capnography is being widely used intraoperatively for confirmation of endotracheal tube placement and for adequacy of ventilation during anesthesia. If facilities are available, the gas sampled for capnography is also used for anesthetic gas monitoring using the principle of mass spectrometry.

Obstruction of sampling line due to water droplets or secretions[2] is not infrequent, especially during long procedures or when a single sampling line is used for a number of cases. Although the water trap prevents entry of these droplets into the monitor, tubing obstruction can lead to erroneous readings or no readings at all.

Many methods are described in the literature to get rid of the obstruction, viz. high gas flows, flushing with a syringe and heat and moisture exchanger.[1]

Recently, during a procedure over the head and neck, we encountered an obstruction such that our anesthesia gas monitor could not analyze the sampled gas to give us readings. The distal end of the sampling line was under the drapes and thus not accessible. The proximal end was not compatible for syringe attachment [Figure 1]. Therefore, we connected the proximal end to the auxillary oxygen flowmeter of the anesthesia machine with oxygen flow at 7 L/min to flush out the obstruction [Figure 2].

When the sampling line was reattached to the monitor [Figure 3], proper capnograph and readings were obtained. Thus, this becomes an effective method of relieving the sampling line obstruction, which does not require any additional equipment. Although there is a disadvantage of dilution of anesthetic gases, it is very transient as high oxygen flows are used for a short duration of time.
Letters to Editor

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