GENERAL ANAESTHESIA FOR CEREBRAL ANGIOGRAPHY

ACIDENTAL HYPERCAPNIA AND ROTAMETER BOBBINS

Sirs,—In common with Drs. Stirling and Collins (Brit. J. Anaesth., 1967), 39, 257, I had a nearly identical experience using an old model Blease pulmoflator with integral anaesthetic head and incorporating a Waters canister in the circuit. After two charges of soda-lime had become “extremely hot” in as many minutes, and as neither an experienced anaesthetic registrar nor myself could think of the cause, we changed over to a Marrett machine there and then and the situation appeared to be resolved. Fifteen to twenty minutes later I noticed the carbon dioxide bobbin at the extreme end of the Rotameter on the Blease machine which was still lying in the theatre. Immediate pH, Pco₂, and standard bicarbonate estimations were done and found to be normal, proving the efficacy of the soda-lime.

Whilst we must all agree with Drs. Stirling and Collins that careful pre-use inspection of our apparatus “should be” mandatory at all times, human frailty being what it is I am sure that a similar type of accident will occur again. I feel that all Rotameter bobbins should be immediately obvious if fully switched on by accident. One of Dr. Trubuhovich’s suggestions (Brit. J. Anaesth., 1967), 39, 607) is a sound one, namely that a wire stop be incorporated at the top of all Rotameters so that the Rotameter bobbin cannot reach the top.

Although most modern Boyle machines have these stops fitted, I feel the one on the oxygen Rotameter for the Halox vaporizer is totally inadequate, the small, red, Rotameter bobbin being quite inconspicuous in the fully on position, and sooner or later a similar report will be coming forth on the inadvertent use of high halothane concentrations, with perhaps a less happy outcome than the recent accidental hypercapnia reports.

I feel that a stop of adequate length should be fitted to this flowmeter immediately, preferably allowing the bobbin to go no further than nine-tenths of the way up the Rotameter. This will still give adequate scope for high halothane concentrations to be used by those who wish to go outwith the normally accepted ranges.

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