

CURRENT COMMENT AND CASE REPORTS

CURRENT COMMENT is a section in ANESTHESIOLOGY in which will appear invited and unsolicited professional and scientific correspondence, abbreviated reports of interesting cases, material of interest to anesthesiologists reprinted from varied sources, brief descriptions of apparatus and appliances, technical suggestions, and short citations of experiences with drugs and methods in anesthesiology. Contributions are urgently solicited. Editorial discretion is reserved in selecting and preparing those published. The author's name or initials will appear with all items included.

CONTROL OF TEMPERATURE OF INSPIRED ATMOSPHERE IN ABSORPTION TECHNIC

Many agree that the prolonged rebreathing of a hot and humid atmosphere is intolerable and unphysiologic. In the closed system of anesthesia, the carbon dioxide absorber, especially of the to-and-fro variety, liberates heat and tends to warm the breathing mixture above normal temperatures. It seems reasonable to expect that reducing the temperature of the anesthetic mixture to physiologic limits would benefit the patient.

Preliminary studies of this problem have revealed an effective method. It consists of the application of one or two icebags to the upper end of the to-and-fro canister and the face piece of the mask. The simplicity of this method is immediately obvious, and although hitherto apparently unreported, it must surely have occurred to and been used by others.

The effects on the course of anesthesia in cases so conducted are particularly striking in hot weather. Respiratory activity remains effortless and manifests a normal respiratory pattern in regard to rate, amplitude and rhythm. The incidence of laryngeal spasm seems distinctly lessened; this finding we attribute to the elimination of laryngeal stimulation by the hot breathing atmosphere. Sweating is abolished or greatly minimized.

Rise in body temperature and in the temperature of the skin are likewise mini-

mized. Pulse rate and arterial blood pressure tend to remain normal under these conditions instead of increasing, as occurs when no cooling system is employed. Temperature readings of the breathing atmosphere were taken in 30 instances in which the patients were undergoing prolonged but nonshocking operations in the summer when the operating room temperature was over 30 C. (85 F.). When there was no cooling system used, the rebreathing atmosphere rapidly attained temperatures of 40 to 45 C. (104 to 113 F.). When the icebag technic was employed, the temperature of the breathing atmosphere remained constant between 29 and 31 C. (83 and 87 F.).

This technic seems applicable in prolonged anesthetics with the to-and-fro canister. It is especially beneficial in hot weather, although it may also be of value at all other times. We venture to suggest that with the circle filter, encirclement of the face piece or of the canister by an ice collar may be of value.

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