A Successful Case of Cardiac Massage for Impending Death under Anaesthesia in a Child aged seven months

BY

J. T. WORSFOLD, M.D., F.F.A.R.C.S. (Eng.)
Chitokoloki, Balovale, N. Rhodesia.

Towards the end of a busy out-patient session at Chitokoloki General Hospital a robust male child aged seven months was presented with a large axillary abscess. Some of the staff had already gone for lunch, but it was decided to open the abscess immediately under a general anaesthetic. No premedication was given.

Ethyl chloride was administered from a spray on an open gauze mask and induction was smooth and rapid. The abscess was incised and large forceps inserted to expand the opening and clear the cavity. As the tissues were stretched the child suddenly stopped breathing. After probably half a minute respiration had not recommenced and it was sensed something was seriously wrong. Artificial respiration was done for a further two—possibly three—minutes, with no response. No heart sounds could be heard, no carotid pulse felt and pupils were widely dilated and all reflexes absent. The child was limp and apparently lifeless.

Remembering Hamilton Bailey's dictum, "Cardiac massage should be resorted to earlier," it was decided at once that cardiac massage without further delay offered the best chance of resuscitation. Few facilities were available and aseptic technique was out of the question, so, after rapidly washing, the abdomen was opened (with the knife that was used to incise the abscess!) with an upper midline incision. The tissues were blanched and there was no haemorrhage. A hand was inserted and cardiac massage was attempted from below the diaphragm. With still no response, it was decided to make a buttonhole opening in the diaphragm and massage the heart from within the pericardium. As the diaphragm was incised the heart gave a flutter and soon began beating very rapidly, and after a short delay respiration was resumed. The abdomen was closed rapidly and the child returned to bed. With a course of tetracycline and sulphonamide the wound healed with only a slight degree of sepsis and the child was discharged well on the twenty-first day (Fig. 1).

Fig. 1—The child fully recovered. Note the midline scar in the upper abdomen.

This case is a reminder that light anaesthesia —for even the most trivial procedure—particularly, I think, when there has been no premedication, carries with it the risk of cardiac arrest due either to ventricular fibrillation or vagal inhibition and possibly induced by the surgical stimulus; and secondly, that once cardiac arrest ("white asphyxia") has occurred, cardiac massage offers good hope of resuscitation *provided it is not delayed.* The longer cardiac massage is delayed, the less the chances of success.

It has been pointed out that intracardiac drugs are usually ineffective and may be dangerous.[1]

Once it is evident cardiac arrest has occurred there should be no hesitation in performing thoracotomy and direct cardiac massage. Any delay will increase the mortality, which Milstein gives as still about 70 per cent. He states that several hundred people die from this condition every year.[2]

REFERENCES

McMillan, I. K. R., Cockett, F. B. & Styles, P. *Thorax* (1952), 7, 205, quoted in *Lancet* (1956), ii, 1201.

Milstein, B. B., *Lancet* (1957), i, 47.