CASE REPORT

Successful transcutaneous external pacing for asystole following cardiac arrest

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SUMMARY

We report a case of successful transcutaneous external pacing for out of hospital cardiac arrest causing asystole.

CASE REPORT

A 47-year-old Asian male experienced chest pain when he was a passenger in a motor car. An ambulance responded within 13 minutes of the driver's urgent 999 call, but the patient collapsed in transfer to the ambulance. During transport to hospital which took 20 minutes, good basic life support was provided by the crew. On reception in the A&E Department, it was confirmed that the patient was unconscious and pulseless; the monitor showed asystole.

The patient was intubated, external cardiac massage was continued and 1200 mcg atropine was administered via the endotracheal tube after 1 mg of adrenaline failed to produce a response. As asystole continued, external (transcutaneous) cardiac pacing with a Life Pak 8 (Physio Control) was commenced and capture was obtained for 15–30 seconds with a good output palpable in the common carotid and femoral arteries. The patient then went into ventricular fibrillation, which was initially resistant to defibrillation, but reverted to sinus rhythm after repeated shocks, lignocaine and bretylium tosylate.

An ECG taken 20 minutes after receiving the patient in the A&E Department showed a right bundle branch block; after two days the ECG showed an anterior myocardial infarction. He was discharged after two weeks when he was pain-free, stable and the ECG showed Q waves in leads V1–4.

DISCUSSION

The outcome of asystole following out of hospital cardiac arrests has been very disappointing (Clinton *et al.*, 1985; Dalsey *et al.*, 1985; White *et al.*, 1985; Zoll *et al.*, 1985; Syverud *et al.*, 1986). A small group of patients who receive good basic life support from bystanders or ambulance crews do not have the irreversible death of large parts of their cardiac musculature and it has been argued that cardiac pacing after administration of atropine should be tried in asystolic patients, although results have been uniformly disappointing.

The above case report shows success after external cardiac pacing and because it is easy and quick to use compared to other methods of pacing, it may be a procedure to try in such situations.

REFERENCES

- Clinton J. E., Zoll P., Zoll R. *et al.* (1985) Emergency noninvasive external cardiac pacing. *Journal of Emergency Medicine* 2, 155–162.
- Dalsey W. C., Syverud S. A. & Hedges J. R. (1985) Emergency department use of transcutaneous pacing for cardiac arrest. *Critical Care Medicine* 3, 129–131.
- Syverud S. A., Dalsey W. C. & Hedges J. R. (1986) Transcutaneous and transvenous cardiac pacing for early bradysystolic cardiac arrest. *Annals of Emergency Medicine* 15, 121–124.
- White J. M., Nowak R. M. & Martin G. B. (1985) Immediate emergency department external cardiac pacing for prehospital bradysystolic arrest. *Annals of Emergency Medicine* 14, 298–302.
- Zoll P. M., Zoll R. H. & Falk R. H. (1985) External noninvasive temporary cardiac pacing: clinical trials. *Circulation* 71, 937–944.