LETTERS TO THE EDITOR

Cardiac arrest card: a new idea for teaching CPR

Sir

In common with other hospitals, we also experienced some problems of teaching cardiopulmonary resuscitation (CPR) viz. frequent changeover of junior staff, lack of proper previous teaching and lack of interest. With the periodic changeover in the house staff, the team may have members who have no previous experience or knowledge, or who may have even learnt wrong techniques by blindly imitating other persons. The deficiency of house staff and nursing staff in the practice of this technique has been highlighted, and has spurred a new approach (Skinner et al., 1985; Wynne et al., 1987).

In the interest of standardizing the procedure, designated consultant staff of the Cardiac Arrest Committee in our hospital allocate a teaching session during the first day of joining. Practical as well as theoretical advice is given. A resuscitation mannequin is used and the participants are also allowed to familiarize themselves with the defibrillators in use in hospital. In an ideal world, each performance of the Arrest team should be supervised by a senior staff to direct and teach, but sadly this is not always possible, especially after normal working hours and unlikely during the early hours of the morning. The junior staff, running to the scene of the arrest, frequently need a quick reference to use as an aide-mémoire. In the heat of the moment, an ideal source must be portable, easy to find, not long to read and hard-wearing to withstand being thrown about in the pocket. Unfortunately, no such aid is commercially available. The British Heart Foundation has a pocket size aid distributed during special events but sadly of little value to medical or nursing personnel.

The new teaching aid

With the above criteria in mind, we looked for various options. In these days, plastic coated cards are quite commonly used by different organizations for ID purposes, banking or even for membership documentation. The material provided the required stiffness to make it robust. Being truly pocketable, it would provide the bearer with an instant reference source which should not take long to read. Lastly, if the card is easy to transport and to read, then it would be easier to follow the guidelines as these are scanned through each time the card is used. As the format is small, it is important that the contents are uncluttered, clear and precise. These cards could also be used by trained non-medical staff. For the previous two reasons, the first side of the card shows basic life support as recommended by the Resuscitation Council (Fig. 1). The reverse of it contains advanced life support as used by the doctors called for an arrest. The details were agreed and a layout was designed so as to give instant visual impact on ‘ventricular fibrillation’ and on ‘asystole’ (Fig. 2).

Typesetting was necessary because of the small pitch used to write all the needed text. Predicting the possibility of further alterations in the future, a first batch of 50 cards was produced at a cost of £20.00. If a larger number of cards was requested the relative cost of each card would have been about 20 pence!
CARDIAC ARREST

1. Confirm diagnosis quickly (absent carotid/femoral pulse and loss of consciousness).
2. Call for help on ext.333, stating whether adult/child and the location.
3. Clear the airways.
   Ventilate - insert No.3 airway and give 100% oxygen at 10 litres/minute using the Ambu bag at 15 inflations/minute.
4. Thump on the chest and start cardiac massage at a rate of 70 compressions/minute.
   Compression/ventilation ratio 5:1.
5. ECG monitor.
6. Defibrillate ('blindly') 200 joules.
7. I.V. access - 50ml of 8.4% Na HCO₃
8. Intubate (E.T. tube) and insert Right Subclavian line if experienced. Give all drugs through line, E.T. tube or intracardiac if necessary.

<table>
<thead>
<tr>
<th>VF/VT</th>
<th>ASYSTOLE/EM Dissoc.</th>
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</thead>
<tbody>
<tr>
<td>Defib. 360 J (max.) ↓</td>
<td>Atropine 0.6 mg. ↓</td>
</tr>
<tr>
<td>10 mls 1% Lignocaine ↓</td>
<td>10 mls Adrenaline 1:10,000 ↓</td>
</tr>
<tr>
<td>Defib. 360 J ↓</td>
<td>Isoprenaline 100 mcg. ↓</td>
</tr>
<tr>
<td>10 mls Adrenaline 1:10,000 ↓</td>
<td>10 mls 10% CaCl₂ ↓</td>
</tr>
<tr>
<td>Defib. 360 J ↓</td>
<td>Pace if complete heart block ↓</td>
</tr>
<tr>
<td>Try Disopyramide 150 mg. i.v. or Mexiletene 150 mg. i.v. ↓</td>
<td>(p waves and very slow ventricular rate). ↓</td>
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</tbody>
</table>

The card was cheap to produce and to distribute, with no fears of revenue consequences. All the juniors who used it found it helpful at least in their early days. The vital telephone code for Cardiac Arrest is on the first side together with the basic life support instructions. Whilst it is hoped that members of the cardiac arrest team are well rehearsed in basic life support, this side of the card can be helpful to nursing, portering and ancillary staff. Both sides of the card are of use to trained ambulance crews and to medical staff. This card is tailor-made according to the guidelines of our local hospital, but its contents could be changed as and if required. To our knowledge, this is a unique effort into teaching and practice of CPR. We intend to distribute the card to all the doctors starting their hospital post, on the same day of joining, possibly attached to their ID card or their radio-pager.

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Splenic injuries

Sir

We would like to add our comments to the articles on splenic injuries by Chambers & Pilbrow and by McLaughlan et al. (Archives of Emergency Medicine 5, 26–37). This department has had for some time a policy or referring all stable post-traumatic patients with abdominal symptoms and/or signs for abdominal ultrasound examination.

During 1987, 26 patients were referred for abdominal ultrasound examination. Their mean age was 36 years (range 12–88 years). None of these patients had a systolic blood pressure lower than 100 mm Hg. Only three patients had a pulse rate faster than 110 beats per minute. All had abdominal tenderness, bowel sounds were present in all but two of the patients and none complained of shoulder tip pain. Six of the patients had fractured lower ribs and three had a pneumothorax. Abdominal ultrasound examination was performed within 2 h of the patients arriving in the accident and emergency department. Eight patients had abnormal examinations. In four, there was evidence of free fluid in the peritoneal cavity, three had splenic tears, two renal damage and one patient had a lacerated liver. Some of the patients had more than one abnormality. Subsequently, two patients required a laparotomy confirming a liver tear in one and a shattered spleen in the other. All patients with abnormal scans were admitted for observation. Further ultrasound examinations at a later stage were performed which showed non progression or resolution of splenic or renal haematoma. Of the 18 patients with normal ultrasound examinations, 10 were discharged home, as we felt confident that they had no intra-abdominal complications. None of these patients returned. The remaining eight patients were admitted because of other serious injuries. None required laparotomies.

Our observation agree with those of McLauchlan et al. (1988) in that patients with intra-abdominal injuries may initially have only non-specific findings. A high degree of suspicion is required in order not to miss an abdominal injury. Same as Chambers & Pilbrow (1988) we find abdominal ultrasound to be a useful tool for screening such patients. We have been able to safely discharge stable patients with upper abdominal tenderness and a normal ultrasound examination rather than admitting them for observation, thus relieving pressure on surgical beds and saving finances.

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