modern medical emergency MANAGEMENT

By **Kathryn Taylor*** and **Julie Burke***

Our experience of training the dental team goes back approximately 12 years when we were first asked by the Yorkshire Deanery (Section 63) to organise and deliver courses in basic life support. Since then, in response to national guidance, these courses have been completely redesigned to incorporate a team approach for the prevention and management of medical emergencies rather than basic life support alone.

The Resuscitation Council

In 2006 (revised 2008) a national document was published by the Resuscitation Council (RC) (UK) which gave comprehensive guidance regarding training that all members of the dental team should receive in addition to the emergency drugs and equipment that should be available. The publication of this document, approved by the General Dental

Council (GDC), led to significant changes in the courses that we delivered.

Among other points the document highlighted the following:

1. Medical emergencies are rare
2. There is a public expectation that dental practitioners and dental care professionals (DCPs) should be competent in managing common medical emergencies
3. All dental practices should have a process for medical risk assessment of their patients
4. All dental practitioners and DCPs should adopt the 'ABCDE' approach to assessing the acutely sick patient
5. Specific emergency drugs and items of emergency medical equipment should be immediately available in all dental surgeries and should be standardised throughout the UK
6. All clinical areas should have immediate access to an automated external defibrillator (AED)
7. All members of the dental team should undergo training in cardiopulmonary resuscitation (CPR), basic airway management and the use of an AED
8. There should be regular practice- and scenario-based exercises using simulated emergencies
9. Staff should be updated annually
10. Audit of medical emergencies should take place.

Although this article was published a number of years ago, it has not been superseded and therefore represents guidelines for current practice. Medical emergencies may well be rare but early recognition of a problem and a speedy

response is essential, therefore team members should practise their management of common emergencies on a regular basis. This reduces the feelings of anxiety and unpreparedness for practitioners and will lead to improved patient care in an emergency situation.

Continuing professional development

Medical emergency training is also a core CPD subject area and it is a GDC requirement that ten hours of verifiable CPD in medical emergencies takes place in the five-year cycle. We have found that one of the best ways of learning how to manage medical emergencies is by using scenarios ie a dental team is given details of a simulated patient (resuscitation doll) who is suffering a particular medical emergency and the team works through the situation in a systematic manner, using an ABCDE approach (Airway, Breathing, Circulation, Disability, Exposure), as recommended by the RC (UK). The simulated patient 'reacts' to the interventions employed and the team gets feedback at the time of the interventions by the trainer leading the scenario. Each member of the team can have an opportunity to take on different roles in different scenarios (ie being team leader in one scenario and being the assistant in another). This may also allow strengths to be identified and probable roles to be assigned to individuals in the event of a 'real' emergency situation. We have found that this, despite initial reservations from some delegates, is an enjoyable way of learning as well!

One question that often arises during training courses is: 'What can I, as a DCP, actually do in the event of a medical

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emergency?’ We have asked for clarification from the British Dental Association (BDA) on this issue and have been advised that DCPs should carry out interventions (using pieces of equipment and/or delivery of drugs) if they are competent to do so. Our training reflects this, so all delegates are trained to the same level and are expected to respond as equally effectively as other members of the team in an emergency. We feel that this ability is an essential part of being a responsible health care professional.

In addition to training requirement, the RC (UK) gives guidance regarding the **minimum** drugs and items of emergency equipment that should be available in dental practices. It is also recommended that all drugs are stored together in emergency drugs storage container and the use of intravenous (IV) drugs is discouraged. Where possible, drugs should also be available in pre-filled syringes for delivery via non-intravenous routes eg inhaled, intramuscularly, orally, sublingually, buccally – in other words via those routes with which we are far more familiar, rather than trying to find a vein to put a needle into.

This minimum requirement is listed as follows:

- Glyceryl trinitrate (400 micrograms/dose)
- Salbutamol aerosol inhaler (100 micrograms/actuation)
- Adrenaline injection 1:1000 (1mg/mL)
- Aspirin dispersible 300 mg
- Glucagon injection 1 mg
- Oral glucose solution/tablets/gel/powder
- Midazolam (10 mg/mL; buccal or intranasal)
- Oxygen.

In the new guidelines from RC (UK) (2010) there is even more emphasis on the use and availability of AEDs. In our experience, there are still large numbers of practices that do not have immediate access to an AED, even though the evidence is clear that early defibrillation markedly improves patient outcome and survival in cardiac emergencies. The importance (and simplicity of use) of the AED is emphasised in this document as although training is recommended, it is felt that an AED can be used safely and effectively without previous training. It goes without saying that all practices should have immediate access to an AED; again, it is our responsibility as health care professionals to optimise patient care in

emergency situations and to have access and the knowledge/skills to effectively use the drugs and equipment in our emergency kits.

Care Quality Commission

As of 1 April 2011, the Care Quality Commission (CQC) will impact on dental practice. The CQC requires all members of the dental team to have the correct training, equipment and drugs to manage medical emergencies as outlined in outcomes 9 and 11:

- Outcome 9H states that it is a practitioner's responsibility to ensure that drugs required for resuscitation or medical emergencies are accessible in tamper evident packaging, and that these are easily accessible
- Outcome 11 states that all staff involved

‘Equipment and drugs
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in using the equipment have the competency and skills needed and have appropriate training

- In addition, equipment should be suitable for its stated purpose, be safe for use, comply with relevant laws, be available in sufficient quantities, installed, used and maintained correctly according to the manufacturer's instructions, in line with legislation with appropriate guidance from expert bodies. This equipment should be properly maintained, tested, serviced and renewed under a recorded programme. It should be stored safely and securely and where the service requires it this should be tamper proof.

The fact that equipment and drugs should be stored in tamper proof or tamper evident packaging is a new concept to dentistry. Initially, it may be difficult for you to source easily for practice use but it brings our medical emergency kits in line with other healthcare environments, ensuring that drugs and equipment are available for you to access in an emergency situation.

Summary

The management of medical emergencies in dental practice has changed during the past few years, most would say for the better, and certainly in the patient's best interests. It is our responsibility to have the correct emergency drugs and equipment immediately available and in the correct presentation. Importantly, we should possess and maintain the knowledge and skills required to manage any emergency that may present in practice.

Further reading

1. Resuscitation Council (UK). Standards for clinical practice and training for dental practitioners and dental care professionals in general dental practice. Revised May 2008. <http://www.resus.org.uk/pages/MEdental.htm>
2. Resuscitation Guidelines 2010. <http://www.resus.org.uk/pages/guide.htm>

Kathryn and Julie deliver the BDA Training essentials course Management of medical emergencies for the whole dental team. For further details and locations visit www.bda.org/training or call the BDA Events team on 020 7563 4590.