Management of emergencies in primary care; Role of GPs & Practice organization

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Key words: emergencies, general practice, management

A medical emergency is an injury or illness that is acute and poses an immediate risk to a person's life or long term health and it’s extremely important to attend to these patients immediately. The early identification of a medical emergency and subsequent management will be helpful to save the patient’s life and prevent irreversible consequences. Acute attacks of asthma, myocardial infarction, anaphylactic shock, hypoglycemic coma, convulsions, head injuries and trauma are some of the common emergencies encountered by general practitioners (GPs)/primary care doctors.

Provision of emergency care is an integral part of general practice and GPs play a major role in the management of medical emergencies. Being first contact care providers, primary care physicians can come across any type of emergency at any time. Availability and accessibility at the community level make them the ideal first contact point for emergency care. The provision of timely, effective, proper and compassionate care require knowledge, proper training, confidence, experience, trained supportive staff and proper practice organization.1,2,3.

Knowledge & Skills

The top most requirement for emergency management is the updated knowledge that aids in the early diagnosis and management. It is a challenge for a primary care doctor to be updated and competent in every emergency that he may come across. One reason is the wide spectrum of problems and the other reason is the rarity of some of the emergencies encountered2.

They should be able to suspect or diagnose that a patient is having a serious problem and be able to carry out at least initial pre hospital management. GPs should also know the indications to admit patients having conditions which can be managed in an out patient set up such as acute attack of asthma and febrile convulsion. They should be competent in therapeutic and diagnostic procedures such as nebulization and Electrocardiography. Exposure into emergency care through training programmes, CME sessions and case discussions with peers could help them to enhance their knowledge and competence. Accessibility to guidelines4 and protocols are vital to update
the knowledge of GPs$^2$ and algorithms for the management of different medical emergencies can be displayed in the emergency management room for quick reference.

General practitioners should be skilled to gather accurate and essential information from all sources including history, physical examination, family members, witnesses to the incident, medical records etc$^5$. They need to have excellent interpersonal skills and communication skills that result in information exchange as well as teaming with patients, family members and paramedical staff$^5$. It’s extremely important to be calm in these situations and lead the staff to carry out what is expected. While practicing emergency care general practitioners should demonstrate caring attitude, respect, compassion, integrity and also should be sensitive and responsive to the needs of patient and family as well. They should understand that these are situations where patients and family are extremely worried and concerned. GPs should try to avoid even a slight delay since that may not be tolerated by carers and could even lead to hostile reactions. Prompt attention, explanation and reassurance would help to alleviate their fears and concerns and gain confidence of patient and carers.

**Paramedical staff**

The presence of trained paramedical staff is also essential to attend to emergencies promptly. The staff at the reception should be educated about the medical emergencies, and they should be advised to give priority to patients who present with medical emergencies. The staff should also be trained to detect patients needing prompt attention such as wheezing, unsteadiness and pain as they enter the premises. Some patients are unaware that they are having a life threatening condition despite having these symptoms and some patients are reluctant to break the queue and trouble the staff and the doctor. Paramedical staff in the practice should be competent in basic procedures such as obtaining intravenous access, stabilizing and maintaining the airway, breathing and circulation and nebulization. They need proper training, regular update of knowledge, encouragement and admiration.

**Practice organization**

**Layout**

The location and the layout of the medical centre play a major role in providing emergency care. It should ideally be situated in the centre of the community, with an easy access to it by any
mode of transport; therefore, care should be taken when a location is being selected for a general practice. It should be spacious and have electricity, water, telephone and toilet facilities and ample parking space. It should have broad entrance and wheel chair access so a patient could be carried or wheeled in if the need arises. There should be an emergency care room close to the entrance and it should be accessible from the consultation room of the doctor (Figure 1). This kind of arrangement will help the doctor to attend to the patient immediately and review the patient while attending to other patients.

Figure 1

Emergency treatment room should be equipped with equipments (Box 1) and a suitable range of medications6,7,8 (Box 2) needed for emergency treatment.
Medications, intravenous fluids and equipment which are essential for emergency management should be stored in a separate place and labeled properly for easy access. The availability of

**Box 1**

1. Nebuliser
2. Suction apparatus
3. Oxygen cylinder with regulator
4. Finger tip pulse oximeter
5. Laryngoscope
6. Airways
7. Ambu bag
8. ECG machine
9. IV cannulas 16 -21G & Butterfly
10. Syringes –Different sizes 3cc, 50cc
11. Glucometer
12. Defibrillator

**Box 2**

1. Adrenaline 1: 1000 vials
2. Chlorpheniramine Iv vials
3. Promethazine IV vials
4. Salbutamol respiratory solution
5. Prednisolone tablets
6. IV hydrocortisone vials
7. Rectal diazepam preparation
8. Aspirin tablets
9. Morphine vials
10. IV Frusemide vials
11. Diclofenac sodium suppository
12. Hyosine butylbromide vials
13. IV fluids –N. Saline, 5%
    Dextrose, 50% Dextrose
stocks and expiry dates of the medications and intravenous fluids should be checked regularly by an appointed person. At the same time, the sterility of the equipments used during emergencies should also be maintained.

**Arrangements for Referral**

Transportation of patients

Even though conditions like acute attacks of asthma, febrile convulsions and hypoglycaemia could be managed entirely in a general practice most of the emergencies such as acute myocardial infarction, ectopic pregnancy and torsion of the testis need to be transferred following initial management. Therefore the primary care medical centre can be patient friendly by having contact details of available ambulance services and other vehicles. This would help to minimize the delay in transferring a patient to the hospital.

Coordination with hospital

The primary care physician can co-ordinate care by informing the hospital about the condition of the patient. Then the hospital would be ready to receive the patient and crucial delays could be avoided.

Referral letter

It’s important to write a referral letter mentioning the essential items of information such as the probable diagnosis (Myocardial infarction), present status (Blood pressure, pulse rate and rhythm), Investigation findings (ECG changes), treatment administered (aspirin), co morbidities (asthma, diabetes mellitus), treatment for co morbidities, drug allergies and other relevant information which would be vital for the assessment, diagnosis and the management of the patient. A structured referral form will be of immense benefit to convey relevant information in such situations

It is extremely important to make the family and care givers aware why patient is referred and the need for prompt admission to avoid undue delays such as seeking second opinion from another doctor or neglecting the problem such as mild discomfort in the chest due to myocardial infarction by a diabetic patient. Advising patients not to take any thing orally in situations such
as torsion of the testis, ectopic pregnancy and to minimize physical exertion such as walking in patients having myocardial infarction are also important part of pre hospital care.

GPs can carry out opportunistic health promotion by displaying posters regarding symptoms of medical emergencies, features of early recognition and first aid measures that should be practiced. Doctors should educate patients who are susceptible to emergencies such as hypoglycaemic and hyperglycaemic attacks about prevention, early detection of impending attacks and measures to be adopted in such situations.

Attending to emergency medical problems is a responsibility of primary care doctors and they should be armed with knowledge, skills, staff, practice organization, equipment and medications to manage patients effectively which may even be life saving.