How Safe Is The Quality Of Medical Care During Medical Outreaches

Y Buowari

Citation

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Abstract

BACKGROUND: Medical outreaches are common in developing countries where most of the populace live in rural communities sand villages living below one dollar per day. METHOD: This is a prospective study in Nigeria of 37 free medical outreaches from 2005-2008 on outreaches with surgical performed on monitoring of anaesthesia.RESULT: During the study period 18(51.35%) had attending medical personnel trained in the administration of anaesthesia. Anaesthesia was monitored with pulse, non-invasive sphygmomanometer and respiratory rate. An anaesthetic chart was designed by that anaesthetist to monitor the course of anaesthesia.CONCLUSION: Safety in anaesthesia and medical practice is important. There is need for the presence of a qualified anaesthetist during the duration of any surgical procedure.

INTRODUCTION

Free medical outreaches organized by religious bodies and non-governmental organizations are becoming popular especially in developing countries and in low resource settings. This is due to poverty and most of the populace cannot afford quality health care. These medical outreaches deliver free medical and surgical services free of charge to the public hence the large crowd that turnout for such programmes. It is carried out in hospitals and health centres. In communities without a health facility, school and community halls are converted into a field hospital. A room is cleaned, disinfected, and used as the operating room. Nevertheless, the question is if such services rendered are safe.

Outreach is an effort by individuals in an organization or group to connect its ideas or practices to the efforts of other organizations, groups, specific audiences or the public[1]. Typically, non-profit civic groups and churches engage in outreach. Outreach strategies are linked to the organizations missions; define targets, goals, and milestones. Health care delivery in Nigeria is plagued by inaccessibility, inconsistency, and poor organization thus the rural people who constitute about 70 % of Nigerians have the least access to health care[2]. During such programmes, a field hospital is set up with surgical theatres and laboratory. At such medical outreaches, medical care is provided free of charge for patients to people who cannot afford routine medical care themselves. Such programmes are sustained through financial donations from individuals, religious groups, civic organizations and donations from pharmaceutical companies. This kind of program is vital because most of the patients cannot afford the cost of buying their own prescriptions or paying for their surgeries. Most of the male patients show up with hernias overdue for surgery. The team is made up of general practitioners, surgeons, optometrists, dentists, dental technician, pharmacists, drivers, cooks, and artisans. Numbered tallies are handed out to the people according to the category of their need such as eye, dental, and general consulting. Various general practitioners according to the numbers on their tallies see the patients. The aim of this study is how safe are the medical outreaches especially anaesthesia administered at such field hospitals.

METHOD

This is a prospective study carried out from 2005 to 2008. Thirty-seven free medical outreaches sites carrying out surgical procedures were studied noting the presence of medical personnel trained in the administration of anaesthesia and monitors used from monitoring anaesthesia during the study period, four different non-governmental organizations organized these outreaches. The general practitioners refer patients who need surgical intervention to the surgical team saw the patients. The patient is counselled

for surgery and informed consent obtained. Packed cell volume and urinalysis are done. Patients with glucose in urine have their fasting blood sugar checked. Anaemic patients, hypertensives, diabetics and other patients with chronic illnesses are referred to a hospital for expert management.

RESULTS

All the medical outreaches studied which offered surgical services were organised by four different non-governmental organizations. During the period of study, 37 free medical outreach sites were studied. Physician anaesthetist was present in 8 (22.86%) of the outreaches while a nurse anaesthetist was present in 27(77.14%) of the medical outreaches. Anaesthesia was monitored in the 8 outreaches with non-invasive sphygmomanometer and pulse oximeter. In 27(77.14%) of the medical outreaches, anaesthesia was monitored using a non-invasive sphygmomanometer and palpating peripheral pulses. They also designed a chart, which was used for recording drugs administered to patients and values of measured parameters. Ketamine anaesthesia was administered at all the sites.

DISCUSSION

The future of safety in anaesthesia lies partly in technological advances in countries that can afford them. The priority however is to address the unacceptable deficiencies in anaesthesia services globally. Surgery without safe anaesthesia cannot be safe. Ketamine anaesthesia was administered at all the medical outreaches studied. The baseline pulse rate, respiratory rate, and blood pressure were noted before administering anaesthesia. In cases where a pulse oximeter is available, oxygen saturation was noted. Anaesthesia was induced with intravenous ketamine.

Safety of the patient is the overriding goal of anaesthesia and the standard of care should not differ from that offered in the operating theatre. Monitoring provides information that improves the safety of the anaesthesia and provides a means to assess physiological function. Appropriate monitors with alarms are intended to enhance but not replace the vigilance of the anaesthetist. Monitoring will not prevent all adverse incidents or accidents in the peri-operative period. However, there is substantial evidence that it reduces the risks of incidents both by detecting the consequences of errors or by giving early warning that the condition of the patient is deteriorating for some other reason. Monitoring which is a process able to identify deviation and then being able to act if this deviation exceeds certain limits plays an important part in avoiding adverse consequences and maintaining optimal performance[3]. In recent years, there has been a worldwide trend towards the adoption of standards of monitoring during anaesthesia and recovery by national anaesthetic societies[4]. There is general agreement among anaesthetist in many countries that the adoption of good monitoring standards in clinical practice leads to improved patients safety. Most of the technologies have fallen sharply in recent years and with time; better monitoring equipment will be widely available. However the availability of better monitoring equipment does not replace the anaesthetist clinical judgement and observations of the patient because it is recognised that patient safety depends largely on the vigilance of the anaesthetist. The recommended standards will evolve with progress in technology; hence, they are not intended to be an exhaustive code for the guidance of anaesthetist. Effective monitoring reduces the potential for adverse outcomes in the peri-operative setting by identifying derangements before they result in serious irreversible injury. Monitoring represents the process by which anaesthetist recognize and evaluate potential physiologic problems in a timely manner. Patient safety is enhanced when appropriative monitoring is operational and clinical judgements are proper. The prime function of the anaesthetist in the operating theatre is to care for the patient. This involves vigilant monitoring, adjustment of anaesthetic, fluid and blood replacement as required. All the patients were monitored with non-invasive blood pressure measurement. On outreaches with an attending anaesthetist monitored anaesthetized patients with a pulse oximeter. The association of anaesthetists of Great Britain and Ireland regard it as essential that certain core standards of monitoring must be used whenever a patient is anaesthetized which includes presence of an anaesthetist. Though no patient in this study had endotracheal intubation, there was need to apply the minimum standard of monitoring. The pulse oximeter a non-invasive measurement of oxygen saturation in arterial blood is a good monitor. Basic monitoring includes non-invasive blood pressure measurement, pulse oximetry, electrocardiography, temperature, and capnography. Proper documentation is important for both quality assurance and malpractice[4].

One of the primary responsibilities of an anaesthetist is to act as a guardian of the anaesthetized patient during surgery[6]. Qualified anaesthesia personnel shall be present in the room throughout the conduct of general anaesthesia, regional anaesthesia and monitored anaesthesia care. This is because

of the rapid changes in the patient status during anaesthesia.

During all anaesthetics, the patient's oxygenation, ventilation, circulation, and temperature shall be continually evaluated. Pulse oximeters are mandatory monitors for any anaesthetic including cases of moderate sedation[6]. Pulse oximetry can be an invaluable aid to the rapid diagnosis of hypoxia. Pulse oximetry is a simple non-invasive method of monitoring the percentage of haemoglobin, which is saturated with oxygen. An oximeter detects hypoxia before the patient becomes clinically cyanosed[7]. Pulse oximetry is useful method of monitoring patients. Patients in many circumstances and in the face of limited resources the pulse oximeter may represent a wise choice of monitors[8]. It allows for the assessment of several different patient parameters. Pulse oximeters are now a standard part of peri-operative monitoring which give the operator a non-invasive indication of the patients' cardio-respiratory status. Although no studies have shown that use of pulse oximetry affects the outcomes of anaesthesia. Pulse oximetry can give an earlier warning sign for hypoxaemia, allowing correction of potential harmful events. It is unpredictable at which level of hypoxaemia the brain, heart and other organs will suffer and to what event irreversible damage may occur. Furthermore, pulse oximetry has resulted in fewer malpractices related litigation problems by physicians[9]. Adequate blood pressure is essential to maintain the blood supply and function of vital organs. Measurement of blood pressure is therefore a key part of the monitoring of patients during anaesthesia[10]. Though there was no mortality at any of the studied medical outreaches, patients should be adequately monitored when anaesthetized as the most important monitor during any anaesthetic procedure is the presence of a trained and vigilant anaesthetist. The administration of any anaesthetic, no matter how trivial is an absolute indication for arterial blood pressures measurement. Presence of a qualified anaesthetist for intra-operative monitoring is important. His is because of rapid changes in patient's status, which can occur during anaesthesia. The presence of an anaesthetist is the main determinant of patient's safety during anaesthesia. The prime function of the anaesthetist in the operating theatre is to care for the patient. This involves vigilant monitoring, adjustment of the anaesthetic and blood replacement as required. Monitoring will not prevent all adverse incidents or accidents in the perioperative period. However, there is substantial evidence that it reduces the risk of incidents and accidents both by detecting the consequences of errors and by giving early warning that the condition of the patient is deteriorating for some reason.

CONCLUSION

Safety of the patient is the overriding of anaesthesia and the standard of care should not differ from that offered in the operating room. Monitoring provides information that improves the safety of anaesthesia and provides a means to access physiological function. There may be some pitfalls in such outreaches such as no detailed medical history and clerking is done, no preoperative anaesthetic visit, no follow up and poor postoperative analgesia. Different governments should make policies to govern such medical outreaches. Peri-operative monitoring is very important. Pulse oximetry is a useful method of monitoring patients in many circumstances and in the face of limited resources; the pulse oximeter may represent a wise choice of monitor. Also organization of short term courses, refresher courses, workshops, seminars and symposiums for general practitioners who are involved in the administration of anaesthesia. There is need for the presence of a qualified anaesthetist physician through out any surgical procedure especially during medical outreaches where several surgeries are carried out in short space of time.

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Author Information

Yvonne Dabota Buowari, MBBS
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