EDITORIAL

MONITORING AT WHAT PRICE?

The days of physical manual monitoring of anaesthetized patients with a finger on pulse and frequent checking of blood pressure and heart auscultation are gone in advanced countries. Although the presence of a qualified anaesthetist in the operating room, still surpasses electronic monitoring in many aspects, these devices have proved themselves far superior in early detection of hypoxia or dysrhythmias, thus adding to patient safety, and reducing anaesthesia related mortality and morbidity. Western countries were quick to realize the importance of monitoring, and American Society of Anaesthesiologists in 1986, and Association of Anaesthetists of UK in 1988 [1], laid down minimal standards of monitoring. These essentially include SpO_2, NIBP and ECG recording for the patient related monitoring, and capnography and oxygen analysers for equipment related monitoring. The failure to incorporate these monitors constitutes neglect on the part of the anaesthetist. International standards for a safe practice of anaesthesia – developed by The International Task Force on Anaesthesia Safety – have recently been published. [2] This high emphasis on monitoring was further strengthened by Closed Claims Studies. [3]. One such study pointed out that the most common cause of injury is difficulty in management of the respiratory system –34% of cases. This also represented the source of the most common untoward result, namely death and brain damage. The three most common respiratory related critical incidents are inadequate ventilation of the lungs, oesophageal intubation and difficult intubation. The inadequate ventilation of lungs was judged largely due to poor monitoring. [4] Non-invasive monitoring was followed by a trend of invasive techniques, but it resulted into a never-ending heated debate on the benefits verses risks of these techniques. The consensus lead to the use of essential monitoring complimented by necessary invasive monitoring, as decided by the anaesthetist.

In our country the situation started improving over the last ten years. At CMH Rawalpindi, there was only one SpO_2 / NIBP monitor for six operating rooms till 1988. Most of the peripheral military hospitals lacked it altogether. The situation was even worse in the civil sector. The major problem there was not of funds, but of lack of trained anaesthetists, who could stress the need and the importance of monitoring. By the grace of Allah, the situation has shown positive change in the recent past, especially after opening up of a number of high-class private hospitals Now most of the anaesthetists demand at least SpO_2 and/or NIBP monitors in the operating room. Cardiac monitors are following the race. Recent incidences of a few anaesthesia related deaths, in which major cause of the mortality was identified as hypoxia/anoxia, have received wide coverage in the national press. Lack of adequate monitoring facilities was one large factor to be blamed in this case. This also contributed positively in building up public pressure on the administration to provide the devices for ensuring safe administration of anaesthesia to the patients. If the trend continues, it can be safely predicted that in near future, it will become impossible for an anaesthetist to think of anaesthetizing a patient without a gas analyzer even in this country.

Safety does not come free. You have to pay a price. Monitoring imposes financial burden twice. First on purchasing the device, and secondly on maintaining it. Most of the monitors in the market bear a price tag, which seems at first glance to be impossible. This is basically due to two factors, the sharp drop in the value of local currency, and the highly inflated profit margins. The companies supplying electromedical equipment rely not on the quantity of the sales, but on earning as much as possible from each single item sold. Thus, a pulse oximeter, which may cost in a Western country about Rs. 25,000/-, is provided at Rs. 75,000/- to 80,000/-. With the expansion of demand, this trend is likely to change. But the real answer lies in local manufacturing of the required monitors. Besides meeting the need of the local consumers, it could be utilized to capture the ever-expanding Asian market. Locally produced item is expected to be four times cheaper, thus enabling us to equip our general wards, too; besides providing full monitoring facilities to operating rooms and critical care units. It could be achieved by offering incentives, and by placing advance purchase orders by the government sector.

The availability of refurbished imported monitors has eased the financial constraints on private institutions, but the lack of credibility and quality assurance is the major hindrance in acceptance of these by major hospitals.

Maintenance of electromedical equipment is another gray area in our country. The suppliers draw heavy amounts for minor repairs, as well as spares, and it is usually quite out of proportion to the actual cost. Poor training and the purchase of a wide variety of each item lead to inability of the maintenance team to master the task to the level of perfection. Most of the hospitals harbor large number of unserviceable / repairable electromedical equipment in their junk stores. Local production might solve this problem as well, as trained tradesmen will become available. In the end it cannot be stressed too much that, even with comparatively high cost of imported items, the money spent on provision of monitoring equipment is absolutely well spent, and no person must be anaesthetized without adequate monitoring. Necessary legislation needs to be done in this regard at appropriate level.

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