

Insight

Uncritical Critical Care: More Things Not to Do

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**“And is not the love of learning
The love of wisdom, which is philosophy?”**
Book One of Plato's Republic

More than ninety per cent of the American health care budget goes to keep patients alive in critical care units during the last ten days of their lives. This takes a heavy toll of the budget for health care elsewhere. To give a telling example, the money needed to keep a child alive in the terminal stage of leukaemia with bone marrow transplants would be equal to the amount needed to keep one thousand pregnant women healthy during their pregnancy as well as their infants' care for one year after delivery. This audit brought forth the Oregon Law that states that “no child would get a bone marrow transplant for leukaemia at the tax payer's cost.” Although this started a lot of debate initially, right now seven other States in the US follow the same law.

Modern hi-tech medicine is a must for emergency care although its validity in chronic illnesses is seriously questioned. When a patient has trauma or any other acute catastrophic illness, we have to, per force, do our best even though the knowledge in that field is equivocal. This does not mean that any technology or drug should be used without proper audit even in the emergency situation^[1]. Many of the audits done so far have not yielded encouraging results. More alarming is the false propaganda of the sellers of drugs and technology in medicine. One European study, reported in the British Medical Journal last week showed that only 6% of the company literature is based on true scientific findings and the rest is only falsehood and mystery to sell their wares!^[2]. Let us take the Coronary Care Units as an example. First started in Kansas City in 1962, they mushroomed all over the world and have even reached the far corners of the third world. The conventional coronary care units have been shown to have made no change in the mortality of acute myocardial infarction. The prevailing wisdom at that time was

that the cause of death in acute MI is the arrhythmia. If one could monitor them for the first few days and treat quickly, one could save countless lives. It looked so attractive that everyone got on to the bandwagon without critically evaluating them. Technology companies made enormous business in the bargain.

CCUs have now changed to ambulance coronary care units doling out thrombolytics at the onset of an acute MI claiming to save millions every year! Again this may be a statistical mirage! The first six hundred patients discharged from such emergency thrombolysis did show marginally reduced in-hospital mortality only to be compensated more than adequately by post discharge mortality in the next six months at home or work place, compared to those that did not get the benefit of the immediate thrombolysis. Then came the era of the TPA and the story is clear to all the readers by now.

Now if one talks to the Divine interventionists they would think that thrombolysis alone is no better than placebo unless it is combined with urgent post-infarction angioplasty and/or bypass surgery. Angioplasties have undergone remarkable changes. The old generation still believes in conventional angioplasty while the newer pundits think that simple plasty causes restenosis in very high percentage of patients and many times soon after the procedure. The National Institute for Clinical Excellence quotes a consensus panel in the US as saying that “the rapid evolution of stent design, deployment approaches, and therapy have led to changes in clinical practice that precede rightly controlled scientific data.” This policy is based on small numbers of studies and that too on very short term follow up. Why then, there is this hurry to recommend them?^[3]. Long-term audits have not shown any one of these in good light. More dangerous and glaring is the recent audit on immediate post infarction bypass surgery. The latter is shown to increase the fatal hemorrhagic stroke rate to go up four fold in those that undergo

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immediate bypass. The study also showed that the greatest risk for fatal stroke now is getting admitted, after a heart attack, to a coronary care unit with an attached bypass set up !^[4].

Restenosis in stent-inserted patients is thought to be less likely in patients with low concentration of homocysteine. Much research is said to have shown that treatment with folic acid and B-6 and B-12 vitamins was started to lower homocysteine levels in post-angioplasty patients. However, an audit did show recently that restenosis is more severe in those treated with folic acid and B vitamins. Cardiologists are now warned not to treat stent-inserted patients with these vitamins!^[5] Another condition that attracted the attention of interventionalists is the unchanged mortality from massive pulmonary embolism. An untested innovation is the catheter thrombectomy - an evolving technology with three variants: simple aspiration through a syringe, mechanical fragmentation followed by aspiration, and rheolytic thrombectomy using a double lumen tube through which saline is passed. None of them have been audited before use.

Recent audits of the per capita mortality of those that were seriously injured in the Vietnam War vis-a-vis those of the Falklands war did show the large gap in our knowledge of managing acute trauma. Even fluid replacement is now in serious trouble with our limited understanding of the physiology of fluid loss. The "dry theorists" who lost out to the "wet theorists," that claimed supremacy of the drop per drop replacement of the lost fluid in the past, seem to have a valid point^[6].

The ill-understood physiology of DIC still makes us do things wrongly for those ill-fated DIC patients. The role of the gut wall in starvation in the immune system function of the victim needs further study before we embark on large scale parenteral feeding. The much touted Swan-Ganz catheter to measure the internal pressures has fallen by the way side having been shown to have sent millions to meet their maker prematurely in the last decade or two after its introduction^[7]. There are

many, many more such uncritical critical care in use these days that cry for serious audit in the best interests of our gullible patients. To do or not to do is the biggest dilemma facing doctors today^[8].

Drugs are no different. While there are six guidelines for hypertension management, all of them put together, include only 39% of hypertensives in their inclusion criteria. The remaining majority of 61% do not have any guidelines except intelligent guessing by the wise doctors! Where then is our evidence based medicine?^[9] Many more such things are discussed in this presentation. "One of the essential qualities of the clinician is interest in humanity, for the secret of patient care is caring for the patient," wrote Francis Weld Peabody (1882-1927). How very true, indeed! Let us care for our patients even when they are in the critical care area despite their difficulties^[10].

Men are "vain authorities who can resolve nothing." (II-13)

Michel de Montaigne. The Essays

REFERENCES

1. Campbell B, Maddern G, Safety and efficacy of interventional procedures. *BMJ* 2003; 326: 347-348.
2. Tuffs HA. Only 6% of drug advertising material is supported by evidence. *BMJ* 2004; 328: 485.
3. Agema WR, Monraats PS, Swinderman AH, et al. Current PTCA practice and clinical outcomes in The Netherlands: the real world of pre-drug eluting stents. *Eur Heart J* 2004; 25:1163-1170.
4. Selnes OA and McKhann GM: Coronary artery bypass surgery and the Brain. *NEJM* 2001; 334:451-452.
5. Lange H, Suryapranata H, De Luca G, et al. Folate therapy and in-stent restenosis after coronary stenting. *N Engl J Med* 2004; 350:2673-2681.
6. Bickelle WH, Wall MJ Jr, Pepe PE. et. al. Immediate Vs delayed fluid replacement for hypotensive patients with penetrating torso injury. *N Engl J Med* 1994; 331:1105-1109.
7. Spodick DH. Swan-Ganz Catheter. *Chest* 1999; 115: 857-858.
8. Hegde BM. To do or not to do. *J Ind Acad Clin Med* 2002; 3: 235-238.
9. Hegde BM. *Heart Manual* 2003. United Book Publishers and Distributors New Delhi-5 India.
10. McCulloch P, Taylor I, Sasako M, et. al. Randomised trials in surgery: problems and solutions. *BMJ* 2002; 324:1448-1451.