ICU
MANAGEMENT & PRACTICE

ISICEM18: Are ICUs doing too much?

With all the tests and treatments available in ICUs, it's good to take a step back and question whether they are necessary, according to presenters at ISICEM 2018.

Over-diagnosis

Jan de Waele, MD, PhD, Critical Care Physician at Ghent University Hospital, Belgium, started by asking if there is over-diagnosis in the ICU, driven by a compulsion for diagnosis and intolerance of uncertainty. He cited pulmonary embolism as an example: there is a potential for maldetection overdiagnosis as it can be there but present no harm. The sophisticated technology available cannot distinguish between harmful and non-harmful disease. He concluded by saying that sometimes "we should just stand there and take a fresh look in the ICU." Overdiagnosis in the ICU has largely been ignored. There is huge potential for misclassification and maldetection diagnosis. However, the extent of the problem is unclear.

Over-testing

Sharon Einav, MSC, MD, Associate Professor in Anesthesiology and Intensive Care Medicine at the Hebrew University in Jerusalem , asked if we do too much testing in the ICU? Daily chest x-rays for stable patients should be a thing of the past (Oba and Zaza 2010). Be judicious with CT scans for patients with a prolonged ICU stay, she advised, as radiation dose is an issue. Are we vampires in the ICU, taking blood all the time, she asked? She cited Ranasinghe and Freeman 2014 and Chant et al. 2006 , who looked at blood taking practices and effects in ICUs. Don't take so many blood tests, said Einav--reflect if you take blood every day why you are doing so. In her own ICU they reduced blood draws from 4 times a day to on demand. It is salutary to know how much blood gets thrown away from hospitals, Einav said, citing a study by Levi (2014): around four times more blood is thrown away each year than is transfused.

She advises some simple rules:

Rule 1: test only if there is a likelihood of a positive finding
Rule 2: Do not test if the findings are obvious
Rule 3: the more tests you send and the closer your 'cutoff' is to the median, the more likely you are to receive a 'random' or 'normal' abrnomal test result.

As for repeating the test in the lab, it adds nothing, said Einav. Onyenekwu et al. (2014) looked at the impact of repeating critical test results and found that there was no significant difference among the samples, there was an average delay of 35-42 minutes in provision of results, and these repeat test accounted for nearly 3% of laboratory running costs, in their study.

Over-invasiveness

Hayley Gershengorn, MD, Associate Professor of Pulmonary and Critical Care Medicine at the University of Miami, Miller School of Medicine reflected on over-invasiveness in the ICU. Invasiveness includes arterial catheters, central venous catheters, chest tubes, endotracheal tubes, epidural drains, Foley catheters, intracranial pressure monitors and nasogastric tubes. Intensivists should question the need for invasive interventions as some invasiveness may be unnecessary. They should study the utility of invasiveness and cease if it is shown to be valueless, for example using arterial catheterisation for blood pressure, when the evidence does not support it. If patients are being admitted only for monitoring in the ICU, this could be done by a nurse elsewhere in the hospital, she suggested. "We may need to accept monitoring or doing less, she concluded", adding that where there is clinical equipoise, we should research their risks and benefits.

Over-treatment

Mervyn Singer, Professor of Intensive Care Medicine at University College London, questioned whether ICU patients were over-treated: too much of a good thing may be harmful, we can be too blasé about common, established drugs, which have not been subject to the rigour that new agents go through. Ask daily “Is this intervention necessary?” he urged delegates.

Over-sizing

Hannah Wunsch, MD, MSc, Associate Professor of Anesthesiology, University of Toronto , closed the session by considering over-sizing of ICUs. Oversizing in intensive care is not a universal problem, as there is wide variability in ICU beds ratio worldwide. However, it can shape and drive care patterns. ICU usage can be reduced but it is challenged by the local culture, methods of reimbursement and creating appropriate alternatives. These alternatives include step down units that can provide some interventions, provide high quality nursing, a high nurse to patient ratio and close to the care team.

Quotes to think about:

Some thoughtful quotes cited by Gershengorn:

“*If you don’t second guess yourself, then you are not trying to get better* ”- Don Mattingly

“*A good decision is based on knowledge, and not on numbers* ” - Plato

“*To do nothing at all is the most difficult thing in the world, the most difficult and the most intellectual* ” - Oscar Wilde

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