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Letter to Editor

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"Neonatal and Pediatric Anesthesia: do we need a change?"

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Letter to the Editor

Dear Editors,

This note has the aim to sensibilize anesthesiologist to reconsider some aspects of neonatal and pediatric anesthesia, and to do it from a different point of view. Many are the changes that neonatal and pediatric anesthesia procedures developed during the last 20 years. The development and application of different clinical data PC driven collecting systems, made anesthesia, in general but especially in smaller patients, more safe and controlled. Actually safe gas anesthesia and the systematic administration of propofol also to smaller patients, permits a better anesthesilogic and cardiovascular stability, a better surgical time also in very complex procedures, a better awakening, and less short and late time complication.

The application of locoregional or "lexical branch" anesthesia combined with gas sedation is very useful to avoid some problems related to patient clinical conditions and/ or, for example, give shortness of anesthetic time. This is a very comfortable aspect to be considered, not only for patients but also for anesthesiologists. Unfortunately we must say that very few developmental studies and speculations have been done to increase the use of "driven PC controlled anesthesia delivery systems" approach. In neonatal and pediatrics patients. In a very few words: we continue to consider the smaller patients applying adult screening criteria;, we also continue to apply the concepts from the point of view of "…how much do I have to administer of an anesthetic drug to get a target…?" ; still, we continue to modulate anesthesia looking at the clinical anesthetic effect response;

We do not consider anesthesia delivery and control from a different point of view:"...if I want to get a target, approximatively very close to 100% of desired effect, how must the anesthetic drug have to change, and what makes these changes possible in human body…". My personal opinion is that something can be changed in the approach to neonatal and pediatric anesthesia. The medical approach has to change first of all in anesthesiologists that must revisit their approach to neonates and toddlers patients, be convinced that they are dealing with dynamic systems and not static systems,; this is show it works nowadays. This makes possible a second postulate to solve the problem: if we understand how and which nature laws physiologically defines a neonate and a toddler, we can give a personalized anesthesia, not clinical response guided but drug modulation administration driven, in the aim to mach, in a safer mode, the surgical requirements.

I'm also convinced that to have an applicative software that takes in account well defined co variables to be programmed to permit a PC driven anesthesia, will give us an help to deliver a correct anesthesia to so difficult patients. Just a note: it is not my intention to affirm that Artificial Intelligence can do better than us our job, but I surely affirm that in anesthesia procedures there always will be an Anesthesia to switch on and switch off the PC.

I can answer to my originary question and say: yes, it is time to change.

- We must develop a dedicated speculation and research task.
- It will be not economically sustained by International Companies because of its cost.

Dr Leonardo Milella

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