

## Regenerative Medicine: Fact or Myth?

Tis a goblet that earns the Mind's praise;  
One hundred kisses upon its forehead man pays.  
This potter of Fate makes his delicate pot so,  
And alas! from his hand to the ground it strays.

*Omar Khayyam, 1048 -1131*

Regenerative medicine is a novel interdisciplinary discipline in medicine dealing with the production of new or re-engineered tissues (either functional or living) to use the product instead of a tissue or an organ (1); the source of this new tissue or organ could be human or animal cells, tissues or organs, and the goal are to restore the function of the tissue or the organ (2).

Is there any role for regenerative medicine in anesthesiology and perioperative medicine? There seem to be challenging when answering this question. First of all, the perioperative management of the organs could be considered as one of the main goals. Perioperative protective effects of regenerative medicine are nowadays more than just a hypothesis. In this issue of the Journal of Cellular and Molecular Anesthesia, Tabashi, et al, have reviewed the role of regenerative medicine in perioperative organ protection through Hypoxia-Inducible Factors (HIF), over several major organs including brain, heart, kidney, lung, and liver; they have demonstrated “a pioneering role of regenerative medicine to prevent perioperative complications” (3). In other words, regenerative medicine could be potentially one of the most important tools in the hands of anesthesiologists for clinical perioperative organ protection during the next couple of years.

However, the studies regarding the role of regenerative medicine in anesthesiology are more than

the field of the operating room and include areas like critical care (4), chronic pain therapy (5), and even, the management of the COVID-19 patients (6). This broad-spectrum application of regenerative medicine leads us to the point that we could use this novel discipline as a “routine clinical tool” in our daily clinical management of anesthesiology and perioperative medicine so soon; a technique long-learned by living cells from the beginning of life and keeping its pace forever; as *Khayyam* quoted “earns the Mind's praise”!

## References

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