decline 17OHP-C," meaning that more than 50% decline. Such a high rate seemed unexpected. We offer our gratitude to Dr Urato for his presumed inclusion of our published results on 17OHP-C in his comprehensive counseling with each patient. ■

David B. Nelson, MD
Donald D. McIntire, PhD
Kenneth J. Leveno, MD
Maternal-Fetal Medicine Division
Department of Obstetrics and Gynecology
University of Texas Southwestern Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, TX 75390-9032
DavidB.Nelson@UTSouthwestern.edu

The authors report no conflict of interest.

REFERENCES

1. Nelson DB, McIntire DD, McDonald J, Gard J, Turicchi P, Leveno KJ. 17-Alpha hydroxyprogesterone caproate did not reduce the rate of recurrent preterm birth in a prospective cohort study. Am J Obstet Gynecol 2017;216:600.e1–9.
2. Society for Maternal-Fetal Medicine Publications Committee. Progestrone and preterm birth prevention: translating clinical trials data into clinical practice. Am J Obstet Gynecol 2012;206:376–86.
3. American College of Obstetricians and Gynecologists. Prediction and prevention of preterm birth. ACOG Practice bulletin no. 130. Obstet Gynecol 2012;120:964–73.
4. Society for Maternal-Fetal Medicine Publications Committee. The choice of progestogen for the prevention of preterm birth in women with singleton pregnancy and prior preterm birth. Am J Obstet Gynecol 2017;216:B11–3.

 https://doi.org/10.1016/j.ajog.2018.12.013

Regenerative medicine in treatment of fecal incontinence: do we understand how it works?

Check for updates

TO THE EDITORS: We read with great interest the article by de Ligny et al,[1] and we think it is an important addition to the current literature on the use of regenerative medicine in treatment of fecal incontinence. We have a few comments on this systematic review that may help deliver its message to the readership.

According to the authors, the use of regenerative medicine in the treatment of fecal incontinence can be applied through 1 of 3 main channels: injection of cells, scaffolds, and trophic factors. It is important to note that regenerative medicine, as the term implies, aims at healing of injured tissues by regeneration, not by fibrosis.

Because regenerative medicine is still evolving, several concepts about tissue healing and the role of stem cells in healing are still not clear. The current concept in regenerative medicine is based on the stem-cell paradigm that suggests that stem cells can differentiate into any type of parenchymal cell and are responsible for healing by regeneration.[2]

In light of this theory, local injection of stem cells at the site of injury, with or without adjunct stimulation or scaffolding, results in healing of injured tissue by regeneration. Although this concept seems ideal and simple, previous studies failed to prove the validity of this hypothesis.[3]

An alternative paradigm of healing by regeneration may exist. Bone marrow–derived progenitor cells may initiate the first step in the regeneration process by the formation of connective tissue stroma that subsequently is infiltrated by parenchymal cells from the surrounding tissues.[4] It is suitable to assume that, if stroma formation by the bone marrow–derived progenitor cells was deficient and took a prolonged duration, then the parenchymal stem/progenitor cells that were stimulated by injury will not find a suitable stroma to proliferate within which will impair the process of regeneration.

Healing of injured skeletal muscles is a vivid example of this regenerative healing process because it entails healing of tissues composed of parenchyma and stroma. Experimental studies have suggested that healing of injured skeletal muscles can occur by regeneration even without the injection of stem cells. By critically studying the results of different and apparently conflicting experimental studies, stem-cell injection seems to accelerate the regenerative healing of injured skeletal muscles.[4] ■

Mohammed El-Said, MD
Sameh Hany Emile, MD
Colorectal Surgery Unit
Faculty of Medicine
Mansoura University
Mansoura, Egypt
mmelsaidshehab@hotmail.com

The authors report no conflict of interest.

REFERENCES

1. De Ligny WR, Kerkhof MH, Ruiz-Zapata AM. Regenerative medicine as a therapeutic option for fecal incontinence: a systematic review of preclinical and clinical studies. Am J Obstet Gynecol 2019;220:142–54.e2.
2. Dulak J, Szade K, Szade A, Nowak W, Józkowicz A. Adult stem cells: hopes and hypes of regenerative medicine. Acta Biochim Pol 2015;62:329–37.
3. Frudinger A, Pfeifer J, Paede J, Kolovetsiou-Kreiner V, Marksteiner R, Halligan S. Autologous skeletal-muscle-derived cell injection for anal incontinence due to obstetric trauma: a 5-year follow-up of an initial study of 10 patients. Colorectal Dis 2015;17:794–801.
4. El-Said M, Emile S. Comment on "A new method for treating fecal incontinence by implanting stem cells derived from human adipose tissue: preliminary findings of a randomized double-blind clinical trial." Stem Cell Res Ther 2018;9:115.

 https://doi.org/10.1016/j.ajog.2018.12.026