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Letter to the editor

Will the Study of Epigenetics Revolutionize Geriatric Surgery?

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Increased life expectancy has brought a heightened demand for healthcare solutions targeted towards the needs of the elderly [1,2]. One of these needs is for treatments to improve outcomes in wound healing. Significant challenges in surgery, especially geriatric surgery, often involve wounds that do not heal properly [2,3]. Comorbidities, lifestyle and environmental factors also influence the healing process [4,5,6,7]. Could future epigenetic therapies play a role in helping to solve some of these problems? There is growing realization of the dynamic and malleable nature of the epigenome and the role that this may play both in adaption / response to diverse environments and innumerous disease / health processes - including outcomes in wound healing [8, 9, 10,11,12,13,14,15,16]. The development and refinement of epigenetic modifiers which are specific and targeted toward wound healing will likely lead to treatments that may improve surgical outcomes in elderly patients. Healthy elders provide longevity dividends to society and the economy via accumulated knowledge and wisdom applied toward encore entrepreneurship, mentorship, and volunteerism [17,18,19,20].

References

- McConatha D, McConatha JT, Cinelli B (1991) Japan's coming crisis: problems for the honorable elders. J Appl Gerontol 10(2): 224-235.
- 2. Clark D, Nakamura M, Miclau T, Marcucio R (2017) Effects of Aging on Fracture Healing. Curr Osteoporos Rep 15(6): 601-608.
- Singh P, Sharma AK, Kumar N, Tamil Mahan P, Rashmi Singh (2017) Bubaline Omasal Derived Extracellular Matrix for Reconstruction of Full Thickness Skin Wounds in Rats. BAOJ Surgery 3: 025.
- Broadbent E, Koschwanez HE (2012) The psychology of wound healing. CurrOpin Psychiatry 25(2):135-140.
- 5. Čarapina I (2015) Psychological Stress and Wound Healing. Gyrus 3(2): 81-85.
- Guyer AJ (2018) Foot and Ankle Surgery in the Diabetic Population. Orthop Clin North Am 49(3): 381-387.
- Ejaz S, Chekarova I, Ahmed M, Nasir A, Ashraf M, et al. (2009) Pollution dilemma in Asian population: CNG and wound healing. Environ Toxicol Pharmacol 28(3): 323-332.
- 8. (2018) 4th International Conference on Epigenetics & Chromatin London, UK.

- Ross CM (2006) Letter regarding article by Weitzman et al, "tobacco smoke exposure is associated with the metabolic syndrome in adolescents". Circulation. 113(9): e393.
- 10. Ross C (2018) Introduction to Epigenetics.
- 11. Doherty TS, Roth TL (2018) Epigenetic Landscapes of the Adversity-Exposed Brain. Prog Mol Biol Transl Sci 157: 1-19.
- Piperigkou Z, Götte M, Theocharis AD, Karamanos NK (2018) Insights into the key roles of epigenetics in matrix macromolecules-associated wound healing. Adv Drug Deliv Rev 129: 16-36.
- 13. Gallagher KA, Joshi A, Carson WF, Schaller M (2015) Epigenetic changes in bone marrow progenitor cells influence the inflammatory phenotype and alter wound healing in type 2 diabetes. Diabetes 64(4): 1420-1430.
- 14. Lirk P, Fiegl H, Weber NC, Hollmann MW (2015) Epigenetics in the perioperative period. Br J Pharmacol 172(11): 2748-2755.
- 15. Champage FA (2013) Epigenetics and developmental plasticity across species. Dev Psychobiol 55(1): 33-41.
- 16. Bayraktar E, Rodriguez-Aguayo C (2015) MicroRNA Therapeutics: Basic Principles, Barriers and Perspectives. BAOJ Cancer Res Ther 1: 014.
- 17. Flynn M (2018) The longevity dividend: how ageing populations could boost economic productivity. The Conversation.
- Canadian Press (2017) Stat Can says rapidly aging population still yields 'demographic dividends' The Chronicle Herald.
- 19. Badal SB, Ott B (2015) A Very Fast-Growing Group of Entrepreneurs: People Over 50. Gallup.
- 20. O'Brien J (2014) The rise of older women as 'encore entrepreneurs' BBC.

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