

Bioethical Issues of Tissue Engineering and Regenerative Medicine: A Preliminary Review from Islamic Perspective

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ABSTRACT

Abstract

Modern advances in biochemistry, cell and molecular biology, genetics, biomedical engineering and material sciences, have contributed to the development of tissue engineering and regenerative medicine (TERM). Although TERM is still in its initial phases, significant breakthrough in this cross-disciplinary area has clearly marked the way for the establishment of a promising new biomedicine technology which actively seeks to reconstruct tissues/organs or spare parts for the human body to repair, restore or replace damaged tissues. However, these breakthroughs have raised number of moral and legal questions, including among others, is it moral to genetically modify the human genes? What are the moral and legal implications of regenerative medicine? Does organ reconstruction or tissue replacement activity violate basic religious beliefs or legal status of the person? Through textual and analytical methods, this paper aims to explore relevant concerns from the Islamic perspective. Besides the texts of the Qur'an and the Prophetic narrations (*hadith*), both Muslim jurists (*fuqaha*) and ethicists' opinion on these matters would be unveiled.

Keywords: *bioethics, Islamic perspective, tissue engineering, regenerative medicine, ethical issues.*

Abstrak

Kemajuan moden dalam biokimia, sel dan biologi molekul, genetik, kejuruteraan dan bioperubatan dan sains bahan, telah menyumbang kepada pembangunan kejuruteraan tisu dan perubatan regeneratif (TERM). Walaupun TERM masih dalam fasa awal, kejayaan besar dalam menembusi rangkaian silang telah memberi penanda yang jelas bagi penubuhan sebuah teknologi bioperubatan baru menjanjikan keaktifan yang bertujuan untuk pembinaan semula tisu/organ atau alat ganti bagi tubuh manusia pembaikan, pemulihan atau menggantikan tisu-tisu yang telah rosak. Walau bagaimanapun, penemuan ini telah menimbulkan beberapa persoalan dari segi moral dan undang-undang, termasuk antara lain, adakah bermoral bagi pengubahsuaian genetik gen manusia? Apakah implikasi moral dan undang-undang terhadap perubatan regeneratif? Adakah pembinaan semula organ atau aktiviti penggantian tisu mencemari kepercayaan asas agama atau status undang-undang seseorang? Melalui penulisan dan kaedah analisis, kajian ini bertujuan untuk meneroka kebimbangan yang berkaitan dari perspektif Islam. Selain daripada ayat-ayat Al-Quran dan riwayat Nabi (*hadith*), pendapat kedua-dua ulama Islam (*fuqaha*) dan ahli etika berkaitan masalah ini dapat didedahkan.

Kata kunci: *bioetika, perspektif islam, kejuruteraan tisu, perubatan regeneratif, isu-isu etika.*



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