

3D-bioprinting 기술을 이용한 재생의학의 순환기 질환에 대한 적용

이왕수*

Clinical Application of Regenerative Medicine with 3D-bioprinting to Cardiovascular Diseases

Wang-Soo Lee*, MD, PhD*

Abstract : Regenerative medicine is multidisciplinary research areas, combined with cell biology, engineering, physics, biomaterials science, and medicine. 3D-printing, first described in 1986 by Charles W. Hull, has been an intriguing technology. Currently, its products are nothing out of the way around us. Furthermore, 3D-printing technology has been recently used in various medical fields under the name of bioprinting or organ printing. 3D-bioprinting is being also applied to regenerative medicine. Cardiovascular disease can be defined as a broad range of diseases that affect the cardiovascular system, such as heart and blood vessels. Cardiovascular disease is highly prevalent among the population and represents the leading causes of death and disability in the developed and developing country. Therefore, numerous researches and efforts have been performed intensively for many years. Regenerative medicine using 3D-bioprinting technology is one of them. More and more 3D-bioprinting technology has recently gained substantial interest for potential applications and roles as a tailored therapy to the individual patient. One of the up-to-date and promising applications of 3D-printing to biomedicine is an organ-on-a-chip. In this presentation, it is focused on what is the current status of 3D-printing technology and how the 3D-bioprinting technology has been applied to medical fields, especially to cardiovascular diseases.

* 중앙대학교병원 순환기내과