Studi preliminari kultur sel dari preputium: identifikasi sel positif oct-4 dan sel positif ki-67 di dermis dan hipodermis = Preliminary Study of Prepuce Skin Cell Culture: Identification of Oct-4 Positive Cells and Ki-67 Positive Cells from Dermis and Hypodermis Layer

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Abstrak

ABSTRAK
Studi tentang sel punca pluripoten di preputium adalah salah satu topik yangbelum banyak dilakukan namun sedang berkembang. Beberapa penanda sepertipenanda pluripotensi oct-4 dan penanda proliferasi ki-67 telah dilaporkankeberadaannya di preputium. Untuk menumbuhkan sel punca tersebut, teknikisolasi dan kultur yang baik perlu dilakukan. Pengertian lebih dalam mengenai selpunca di preputium dapa tmembuka kemungkinan baru dalam terapi rekonstruksikulit seperti cangkok kulit. Tujuan riset ini adalah untuk melakukan penetapanmetode awal isolasi dan kultur sel dermis dan hipodermis preputium danmengidentifikasi sel positif oct-4 dan ki-67.Dermis dan hipodermis diisolasi dan dikultur di 12-well plate dan dipindahkan ke24-well plate. Kultur diobservasi untuk identifikasi sel-sel fibroblastik. Panen seldilakukan dengan tripsinasi dan sentrifugasi. Pellet difiksasi dengan methanol dandi-mount ke preparat histologi. Preparat diproses immunositokimia denganantibodi oct-4 dan ki-67 dan diobservasi dibawah mikroskop cahaya.Pada kesimpulannya, dibutuhkan lebih banyak sel untuk analisis sel positif oct-4dan ki-67. Oleh karena itu, optimasi metode isolasi dan kultur dermis danhipodermis preputium masih diperlukan.
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ABSTRACT
The study on pluripotent stem cell in prepuce is one of the topic on stem cell that is not yet common but rapidly developing. Several markers such as Oct 4 for pluripotency and ki 67 for proliferation have been reported in prepuce. To generate these stem cells, careful isolation and cell culture are performed. Better understanding of stem cells in prepuce can open more possibilities in skin regeneration and skin reconstruction treatment such as skin graft. This research aims to perform initial establishment method for isolation and culture of prepuce skin rsquo s dermis and hypodermis and to identify oct 4 and ki 67 positive cells from the culture derived cells.The dermis and hypodermis of prepuce were isolated and cultured in 12 well plate for 7 days and transferred into 24 well plate. The culture was observed for fibroblastic like cells. The cells were harvested using trypsinization and centrifugation. The pellets were fixated on methanol to be mounted on histological slides. Immunocytochemistry using oct 4 and ki 67 antibody were performed on the samples. The samples were observed under light microscope.Fibroblastic like cells were found in one of the culture on the 7th day. Dermis culture has more pellet of harvested cells compared to hypodermis culture. Histological slides examination revealed few number of cells and debris can be found. Oct 4 positive cells were found in dermis sample and there were no ki 67 positive cells.