COMPARISON OF GREEN TEA EXTRACT AND COCONUT WATER TO MAINTAIN THE VIABILITY OF FIBROBLAST CELL

ABSTRACT

Background. Tooth avulsion is one of the main issues in dental traumatology because of its status as a severe dental injury. When avulsion occurs, the alvused tooth should be immediately replanted. However, immediate replanted is not always possible. In such case, storage media is used to preserve PDL cell viability. Green tea extract has been reported to have remarkable anti-inflammatory, antioxidant and anticarcinogenic effects. It also contain catechin, which is one of the polyphenols from green tea. Coconut water is rich presence of amino acids, proteins, vitamins and minerals. Purpose. The aim of this study was to evaluate the efficacy of a new storage media, green tea extract in comparison with coconut water in maintaining the viability of PDL cells. Method. By using BHK-21 fibroblast cells as periondal ligament was cultured and stored in the following media : (1) Green tea extract, (2) Coconut water, (3) eagle’s media and (4) aquades. After 1 hour, cells in different media were exemined by ELISA reader at wavelength 620 nm. Results. The result shows that green tea extract is higher in maintaining the viability of fibroblast cell compared with coconut water. Conclusion. It can be concluded that green tea extract can maintained the viability of fibroblast cell better than coconut water.

Keywords: Fibroblast cell, Green tea extract, Coconut water