

Cytocidal Effect of *Calotropis Procera* Latex's Aqueous Extract on Human Epidermoid Carcinoma (A431 Cell Line) and Primary Chicken Embryo Fibroblast Cells: A Preliminary Study

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ABSTRACT

Epidermoid carcinoma is most common type of cancer. Some traditional plants like *Calotropis procera* can be used in its treatment as described in Ayurveda. In present study cytocidal activity of aqueous extract of latex from *Calotropis procera* against human epidermoid carcinoma (A431) cells was evaluated. Fresh latex was collected from healthy plants via small incisions near the small leaves and diluted in sterile water at a ratio of 1:1 (v/v). This mixture is centrifuged at 5,000 g for 10 min to obtain *Calotropis procera* aqueous extract (CPE) and to remove solid particles and aggregates. Supernatant was filtered and stored at 4°C before use. The cell line A431 was purchased from National Centre for Cell Science, Pune and primary chicken embryo fibroblast cells was cultured from 8 day old chicken embryo. The CPE (dissolved in PBS) was tested for its cytocidal effect in 96-wells tissue culture plate against A431 cell line and primary chicken embryo fibroblast cell culture at different concentration i.e. 1000, 100, 10 and 1 mg/ml. The viability of A431 cell line was determined by using Trypan blue dye exclusion method and on the basis of their morphology. The extract of concentration 1000 mg/ ml resulted in death of both cell cultures. When exposed to a concentration 100mg/ml extract caused death of A431 cell line only. Further decrease in concentration to 10mg/ml showed comparatively less cytocidal effect. From this we concluded that 100mg/ml of CPE is toxic for carcinoma cell line leaving chicken embryo fibroblast cell line unaffected. Our study revealed that CPE can have significant results in skin cancer medication.

Keywords: *Calotropis procera*, Human epidermoid carcinoma (A431) cells, CPE, Chicken embryo fibroblast cell culture, Cytocidal