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Merkel cell carcinoma in an 82-year-old Filipino male: A case report and literature review**Hydelene B Dominguez**

SLU-Hospital of the Sacred Heart, Philippines Development of composition and technology of vincristine nanoparticles using high-molecular carbohydrates of plant origin

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Despite the continuous improvement of cancer fighting strategies, it still remains the main cause of mortality worldwide. The rise of cancer worldwide on the one hand is a major obstacle to human well-being and on the other hand to economies of even the developed and rich countries. In 2010, the total annual cost of cancer was estimated to reach approximately 1.16 trillion dollars. Current cancer therapy strategies are based on surgery, radiotherapy and chemotherapy. The problems associated with chemotherapy are one of the biggest challenges for clinical medicine. These include: low specificity, broad spectrum of side effects, toxicity and development of cellular resistance. Therefore, anti-cancer drugs need to be developed urgently. Particularly, in order to increase efficiency of anti-cancer drugs and reduce their side effects, scientists work on formulation of nano-drugs, using nanotechnology and natural excipients. The objective of this study was to develop composition and technology of vincristine nanoparticles using high-molecular carbohydrates of plant origin. Due to the theory that by target metabolism of glucose, it is possible to develop selective mechanism against cancer we have used plant polysaccharides, particularly, soy bean seed polysaccharides, flaxseed polysaccharides, citrus pectin, gum Arabic, sodium alginate. Based on biopharmaceutical research series vincristine containing nanoparticle formulations were prepared. High-energy emulsification and solvent evaporation methods were used for preparation of nanosystems. Polysorbate 80, polysorbate 60, sodium dodecyl sulfate, glycerol, PVA were used in compositions as emulsifying agent and stabilizer of the system. The ratio of API and polysaccharides, also the type of the stabilizing and emulsifying agents is very effective on the particle size of the final product. The influence of preparation technology, type and concentration of stabilizing agents on the properties of nanoparticles were evaluated. For the next stage of research nanosystems were characterized. Physicochemical characterization of nanoparticles: their size, shape, distribution was performed using AFM (atomic force microscope) and SEM (scanning electron microscope). The present study explored the possibility of production of NPs using plant polysaccharides. Optimal ratio of API and plant polysaccharides, the best stabilizer and emulsifying agent was determined. SEM showed that nanoparticles were spherical in shape. The average range of nanoparticles was visualized by SEM.

lamziraebalidze@gmail.com in malignancy that develops usually in sun-exposed areas, most common on the head and neck area (55%). MCC is mainly a malignancy of UV-exposed and fair-skinned elderly Caucasians. We report the case of an 82-year-old Filipino male who presented with progressive left leg swelling with multiple nodules of varying sizes. The nodules were excised and pathologic diagnosis revealed MCC. The patient underwent chemotherapy however expired due to acute respiratory failure type 1 secondary to acute kidney injury as a complication of tumor lysis syndrome. MCC carries a poor prognosis hence early detection is warranted and vital for patient's survival.

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