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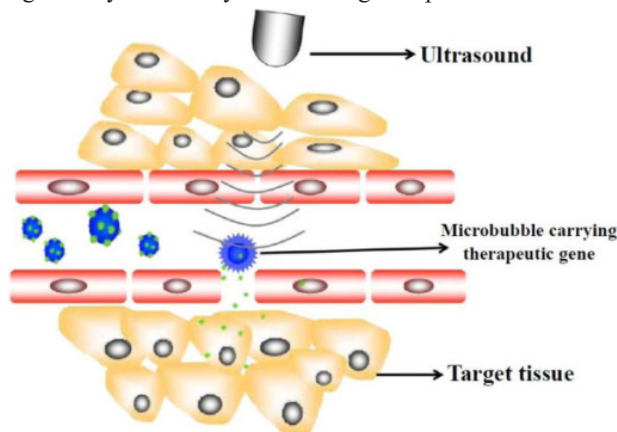
Sonoporation in the management of Oral cancer - emerging technologies and advancements

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Abstract

Ultrasound is a traditional non-invasive, diagnostic modality, which is now emerging as a promising therapeutic aid in medical and dental sciences. Sonoporation is a technique which employs the acoustic cavitation of microbubbles to generate transient, non-specific pores on membranes which increases the permeability to bioactive molecules. This in turn enhances the delivery of large molecules such as DNA into viable cells which can be used for enhancing local drug delivery systems, gene therapy and molecular biology. Oral squamous cell carcinomas are the most common type of malignant neoplasm. Although clinical treatment is generally accomplished with surgery in those cases, the prognosis is not particularly good and the use of antiproliferative agents, such as 5-fluorouracil, mitomycin C and BLM, has been reported to remarkably improve the therapeutic effect. Systemic administration of these drugs results in general toxicity, thus, to avoid unexpected complications, several local drug delivery methods have been rapidly developed. A required amount of drug concentration at the diseased site is achieved by local drug delivery while limiting toxicity for healthy tissues using sonoporation.



Biography

Devyani Bahl is Experienced Oral Surgeon with a demonstrated history of working in the higher education industry. She is skilled in oral and maxillofacial surgery, cosmetology, healthcare, medicine, and managing emergency care in trauma patients. A strong healthcare services professional with a keen interest in research and new technologies, she is open to learning from each and every one on this platform.

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