

# Global Wound Care Congress

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## CURCUMIN ADMINISTRATION ACCELERATES WOUND REPAIR AND REGENERATION IN THE EXCISION WOUND OF MICE EXPOSED TO DIFFERENT DOSES OF FRACTIONATED $\gamma$ -RADIATION

Ganesh Chandra Jagetia<sup>a</sup> and Golgod Krishnamurthy Rajanikanth<sup>b</sup><sup>a</sup>Mizoram University, India<sup>b</sup>National Institute of Technology, India

Ionizing radiations used to treat cancer in more than 50% cases and fractionated irradiation before or after surgery of malignant tumors leads into a high frequency of wound healing related complications indicating the need to devise strategies that can reduce these complications. Curcumin or diferuloylmethane is an active principle present in the turmeric, which gives a characteristic flavor and yellow color to different cuisines. It has been credited with several medicinal properties in India and Asia. Therefore, we decided to study its wound healing activity in the deep excision wound of mice exposed to different doses of fractionated  $\gamma$ -irradiation by mimicking clinical conditions. A full-thickness dermal excision wound was created on the shaved dorsum of mice orally administered or not with 100 mg/kg body weight of curcumin before partial body exposure to 10, 20 or 40 Gy given as 2 Gy/day for 5, 10 or 20 days. The wound contraction was periodically studied by capturing video images of the wound from day one until complete healing of wounds. Fractionated irradiation of mice caused a dose dependent delay in the wound contraction and prolonged wound healing time, whereas curcumin administration prior to fractionated irradiation resulted in a significant rise in the wound contraction and curtailed mean wound healing time. Fractionated irradiation reduced the synthesis of collagen, DNA and nitric oxide in the regenerating wounds at different post-irradiation times, whereas treatment of mice with curcumin before irradiation elevated the synthesis of collagen, DNA and nitric oxide significantly. Histological examination revealed a reduction in the collagen deposition, fibroblast and vascular densities after fractionated irradiation, whereas curcumin pretreatment inhibited this decline significantly. Our study demonstrates that curcumin pretreatment accelerated healing of irradiated wound and could be a substantial therapeutic strategy in the management of irradiated wounds.

[gc.jagetia@gmail.com](mailto:gc.jagetia@gmail.com)

## ANESTHESIA FOR MORBID OBESITY

Praveen Maheshwari<sup>a</sup><sup>a</sup>University of Oklahoma, Oklahoma City, USA

Prevalence of obesity is increasing all over the world. Obese patients are not just large but they also have multiple physiological and anatomical changes associated with obesity. These patients have multiple co morbidities associated with obesity which are independent predictors of poor outcome in the perioperative period. Obesity has its effect on bolus dosing and infusions of medications. Obesity makes these patients at higher risk for anesthesia. So it is very important for anesthesiologists to know about all these changes and how to manage these patient safely and efficiently in the perioperative period. The aim of my talk is to understand the magnitude of the problem, anatomical and physiological changes of obesity, comorbidities associated with obesity, their effect on anesthesia and their management in the perioperative period.

[praveen-maheshwari@ouhsc.edu](mailto:praveen-maheshwari@ouhsc.edu)