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Title of the Abstract: Development of a chitosan-vaseline gauze dressing with wound-healing promoting properties

Author Name: Qing-Qing **Fang**; Xiao-Feng **Wang**; Wan-Yi **Zhao**; Wei-Qiang **Tan**

Affiliation: Department of Plastic Surgery, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou, Zhejiang Province, PR China.

University: Zhejiang University

Country: China

Abstract:

Infectious complications and profound fluid loss can lead to shock or even death after trauma, wound dressings are always needed for better treatment[1,2]. Although some dressings have been produced, some are not effective in killing bacteria or controlling other situations, while some are useful but at great expense[3,4]. Our group developed a chitosan-based dressing with potent antimicrobial and improved healing properties. The chitosan-vaseline dressing (CVG) was developed by coating chitosan mixture and vaseline on sterile gauze and subsequent drying. Infrared spectroscopy investigated the miscibility of this system and functional group interaction. The structure of the dressing was revealed by scanning electron microscopy. The cytotoxicity of the material was tested *in vitro*, which showed no significant difference in the dressing extract groups and the negative control group. The increased water retention rate was in the range of 8-12% after applying CVG for two hours. The CVG also showed good antimicrobial nature against both gram positive and gram negative bacteria. Wound healing and tissue compatibility studies were carried out over a period of 14 days on rat models. It was observed fast healing in the CVG treated wounds, comparing to the control group. These results indicate that vaseline with chitosan based dressing material could be promising candidates for wound dressings.

Biography:

Dr. Fang is a doctoral student of surgery in Zhejiang University, engaging in the basic research on wound healing and scar formation. Together with her research members, she explored the pathological mechanism of wound healing, improved wound healing by using biological tissue engineering methods. Besides, she also participated in elucidating the mechanism of angiotensin converting enzyme involved in scar formation. In the recent 3 years, as the first or co-first author, Dr. Fang has published 4 SCI papers[5-8]. She

will continue to carry out basic research in this field, and hope to make progress in skin regeneration.

Research Interests:
The mechanism of wound healing and scar formation, the promotion of acute and chronic wound healing, the improvement of scar formation, and the induction of skin regeneration.

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Mail Id: 11618208@zju.edu.cn

Contact Number: 86-18868819744

Suggestions of colleagues/Professors/scholars to send invitation (if any)
Suggestions of Sessions to the conference (if any)