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THE DIFFERENT CHANGE OF STRUCTURE OF DERMAL TISSUES DURING INJURY AND REPAIR

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The skin lines outside of human being and is the largest organ in the human being. When it is injured, it will affect the quality of human life, such as decreased self-esteem and poor self-perception, which are not beneficial for the physical and psychiatric health of human being. Currently, the problems are still not resolved. Therefore, it is imperative to find the ideal ways to clarify the mechanism. Clinic works and currently researches implicated the integrity and continuity of dermal tissues plays an important role in the wound healing. Researchers have known the difference between normal tissues and wound healed tissue, however, these information are based on the two-dimensional structure and not complete. A novel technique, phase-contrast micro-tomography with synchrotron radiation (PCTSR), showed that the normal tissue was consistently characterized by oval-shaped units oriented in a specific way on the micrometer scale, which was not observed in scar tissues. In addition, the previous study also showed that the non-wound skin from diabetes was different from the health human being and indicative of the chronic foot ulcer. In order to further explore the changes of the structure of skin, we tried to apply for the small angle X-ray scattering (SAXS) to observe the skin after wound healed.The results showed that there is difference between the normal tissue and abnormal tissue, there is even difference between the normal collagen fiber and fibers in different degree of burns, the diabetic. The results will be beneficial for skin tissue engineering, and wound regeneration.

Biography

Yuzhi Jiang graduated from the Second Military Medical University as Medical Doctor, with the specialties including Plastic surgery, Microsurgery. Then he started working at Shanghai burns institute, Ruijin Hosptial, Shanghai Jiao Tong University School of Medicine where he has continued his research.

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