

## Rehabilitation of a patient with grade IV diabetic foot ulcer complicated with sepsis

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### Abstract

In April 2017, a patient with grade IV diabetic foot ulcer was admitted. The left foot had 18 cavities, among which deepest of its sinuses was up to 9 cm. The patient had severe anemia and critically severe hypoproteinemia, blood glucose and white blood cell tests revealed four times of critical values, after a multi-disciplinary consultation, amputation was recommended. However, the patient was in financial difficulty and refused surgical treatment, the patient was in danger of life at any time.

Based on the expert consultation of the medical association, a pocket negative pressure device with low price, which was designed independently by an expert and had won many patents, was adopted for the patient. The expert opened the wound together with the hospital's wound therapist and chief physician, gradually debrided the wound several times, placed the self-made pocket negative pressure device, to fully drain each sinus. Blood glucose management, whole body nutrition support and exercise therapy were given as adjuvant therapies. In addition, the wound nurse responsible for the patient in the hospital was trained online and offline to guide the operation, until she mastered the technique.

After 10 rounds of negative pressure treatment for 62 days, the patient had the affected limb kept, and discharged from the hospital. No ulcer recurred during 1.5 years of outpatient follow-up. Since June 2017, the county hospital successfully avoided amputation of six diabetic patients using this technique. The incident was widely reported the news media.

Through the consultation and training of experienced medical association experts, medical staff in small and medium-sized cities and remote areas lacking technical resources can be enabled to use pocket negative pressure devices with excellent features and cheap prices. This can bring about great convenience to patients with complicated wounds and economic difficulties and avoid amputation.

### Biography

Yu Chen graduated from Sichuan University, she has designed and achieved 13 patents in the spare time, including: constant temperature pressurized wound irrigation device, etc. The cases and the inventions have been selected as the poster presentations of the WUWHs and WOCN in USA for 4 times. "The tiny negative-pressure wound closure device" has won the third prize for excellent innovation in China. She has built an inter-hospital and inter-department horizontal "10-min wound polyclinic circles" around hospital. She has built a "wound care 1+1+N" longitudinal treatment circle around Chengdu. She also has completed the first pressure injury micro-public film in China which participated in the first WHO microfilm festival in 2020. Together with student volunteers, she set up a "Moshang Community", where a series of lectures on pressure injury prevention were held, with people from nearby 40 streets, nearly 300 communities and 20 nursing homes getting involved.

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