Dear Sir,

Usual problems after hand and upper extremity operations include infection and wound healing problems following skin maceration [1,2]. These problems are obvious especially after staged reconstruction of fingers or hands with local or distant flaps, such as groin or cross-finger flaps, and congenital hand operations, such as syndactyly release. In such patients, surgeons use special maneuvers, such as computer fans, to reduce the moisture and improve patient comfort after these operations [2].

Polyurethane has two main uses in medicine; the first use is as a dressing material in negative pressure wound therapy (NPWT) [3], and the other use is as a shell around silicone breast implants to reduce capsular contracture formation [4]. The antimicrobial activity of polyurethane has been increased by new developmental strategies [5-7]. In NPWT, polyurethane is used as a foam to provide an antimicrobial environment over the wound, while permitting liquid drainage to a suction system [3]. The authors used polyurethane foam (PF) in routine hand surgery dressings to reduce secondary wound infections and wound healing problems, especially in patients who require the use of splints for long periods of time. Different forms of PF were used for this purpose, such as pure forms for non-infected, non-contaminated wounds, and silver impregnated forms for contaminated wounds, which have a purulent discharge.

Rectangular pieces of foam are easily shaped by cutting to fit the material to the webs and fingers (Figures 1,2). Another advantage of the material is that it does not adhere to the wound, which is usually seen with conventional gauze dressings in which pain is caused when the dressings are changed as a result of wound adherence. In patients who were reconstructed with cross-finger and groin flaps, foam was used to cover the raw surface of the pedicle without the need of any skin grafts. Dark and white colored foams exist that may be used for hand dressings. In particular, there are some...
trademark brands that are composed of antibiotic-impregnated white polyurethane foams. According to the wound’s nature, the foam may be changed. If there is a discharge from the wound, pieces from the foam may be harvested for wound culturing.

None of our patients whose dressings were changed experienced any infections. PF also provides protection against maceration by enhancing air in-flow into the wound and helping to maintain the desired positions of the fingers until the dressing is changed. In patients who undergo syndactyly release, wedge-shaped foam easily opens the web space. The only problem with its utilization was the development of atopic dermatitis in two patients, which was treated by using topical steroid ointments after the healing process.

The main disadvantage of PF is the expense of the NPWT sets that contain the foam. Thus, the remaining untouched foams from NPWT treatments can be used after an autoclaving process according to the manufacturers’ suggestions.

In our opinion, PF is a useful material that can be used in hand dressings because of its numerous advantages, such as antimicrobial activity (especially when the PF is impregnated with antibiotic material), resistance to maceration, easy shaping and positioning, and non-adherent properties, which prevent pain during dressing changes.

**Conflict of interest statement**

The authors have no conflicts of interest to declare.

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