

## An alternative approach to gynecological wound healing

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An 89-year-old woman was referred to our Clinic with vulvar cancer. She also suffered from obesity [with body mass index (BMI) 35 kg/m<sup>2</sup>], persistent hypertension, diabetes mellitus type 2 treated with oral medications. In 2015 she underwent a surgery due to endometrial carcinoma. Total abdominal hysterectomy with bilateral salpingo-oophorectomy, omentectomy and pelvic node dissection was performed (histopathology revealed adenocarcinoma serosum G2; FIGO stage Ib). In January 2016 after vulvar ulceration biopsy plano-epithelial squamous vulvar cancer was diagnosed. She was referred to surgery. She has undergone an operation in October 2016. She was admitted to gynaecological unit at our institution. Physical examination revealed mutilated vulva with excised labia major, labia minor, and narrowing of vaginal orifice. The right side shown tumor 2.5 cm in diameter, with slough area and no deep infiltration and satellital nodule on the left labia majora 1 cm in diameter. The cervix, vaginal wall, rectum and anus appeared normal. There were no enlarged lymph nodes at the inguinal area.

Simple vulvectomy was performed with macroscopically healthy margin of one centimeter. Patient denied inguinal lymphadenectomy therefore nodal status is unknown. Simple reconstruction of the vulva was impossible due to increased tension of tissues. Therefore transposition of skin lap from the left buttock was obtained which helped to minimize and redistribute tension of the surrounding tissues during vulva reconstruction. Perioperative blood loss was estimated about 300 mL. For prophylactic perioperative antibiotic therapy 2000 mg of cefazoline was used. Bladder was catheterized and 24 hour dressing was patched. The postoperative course was within normal blood pressure not exceed 130/80 mm Hg. Postoperative glucose levels were higher than 160 mg/dL. The routine laboratory investigations were within the normal ranges, the blood tests results were as follows: Hb — 11.1 g/dL, erythrocytes 3.6 mL/L, 7.2 thousand leucocytes/L, platelets — 172 thousand/ $\mu$ L. The patient was discharged home in fourth postoperative day with proper wound healing. Antibacterial ointment composed of polymyxin, bacitracin and neomycin was recommended as a routine wound care.

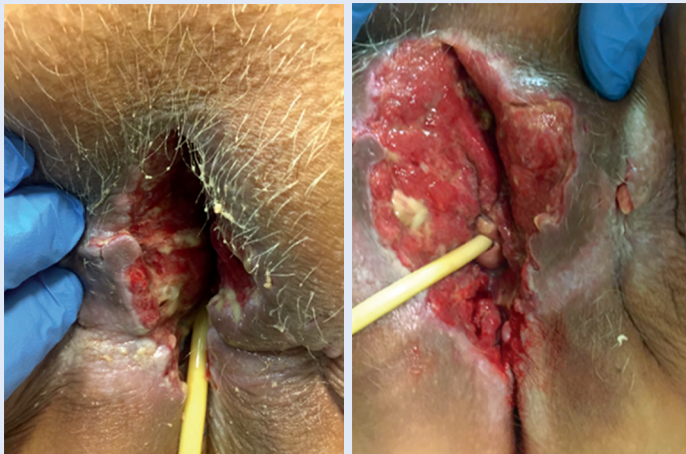
The patient reported in the fourteenth postoperative day. She was admitted to the unit due to the total disperse of the operated site. Bacterial smear was taken and alarm pathogen was detected (*Morganella morgani* and *Pseudomonas aeruginosa* both with multidrug resistance). She received ciprofloxacin 500 mg twice a day. Fever has not occurred, CRP was not increased. The area of wound was sloughed, bleeding on touch, with abundant serous exudate. An experimental wound treatment was implemented. Wound was irrigated with fluid containing hypochlorous acid (Granudacyn<sup>®</sup>) twice a day. In addition, once a day for a night 2% cream Argotiab<sup>™</sup> containing titanium-silver complex was applied.

Figure 1 shows the appearance of the wound in fourth day of therapy. At the day seven visible improvement in the vulvar healing process was noted with reduction of wound exudate. We decided to place single sutures to approximate wound edges precisely. Considering proper wound healing, oral antibiotic was discontinued whereas topical treatment was still applied. The patient was discharged on the ninth day of hospitalization with guidance of wound treatment at home. The advancement of wound healing at discharge from the department is presented on Figure 2. Simple wound care regimen allowed to continue the treatment at home, despite the advanced age of the patient and difficult access to the wound site. During post-operative follow-up in outpatient clinic after 2 weeks of treatment (Fig. 3) and after 4 weeks of treatment (Fig. 4) we observed a properly healed wound.

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Modern methods of local treatment of wounds can provide an alternative solution to previously used regimens. In case of gynaecologic wound infection — which etiology is often mixed — selection of an appropriate antibiotic treatment can be difficult. Product containing the silver-titanium complex with broad antimicrobial, antiviral and antifungal spectrum is an effective alternative, reducing patient exposure to side effects of antibiotic systemic therapy. Simplicity of its application enables wound treatment on an outpatient basis.



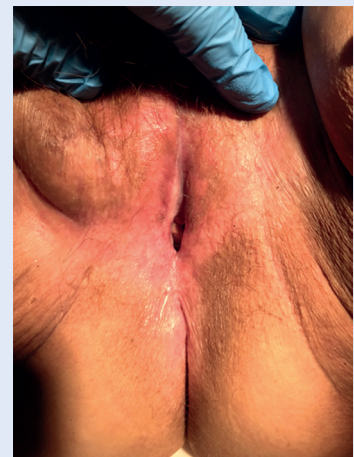
**Figure 1.** Vulva on the 4th day of treatment



**Figure 2.** The ninth day of treatment. In the upper pole of the wound visible stitches applied in the seventh day of treatment bringing closer the edges of the wound



**Figure 3.** The fourteenth day of treatment



**Figure 4.** The wound after 4 weeks of topical treatment