

NEW ASPECTS REGARDING PERCUTANEOUS FRACTIONATED RADIOTHERAPY OF THE GROIN TO ELIMINATE LYMPHATIC FISTULAS AFTER VASCULAR SURGERY

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Purpose: Vascular surgery of the inguinal area can be complicated by persistent lymphatic fistulas. Rapid and effective treatment is essential to prevent infection, sepsis, bleeding, and possible leg amputation. Current data on irradiation of lymphatic fistulas lacks of recommendation on the appropriate individual and total dose, the time of irradiation, and the target volume. Presumably, a dose of 0.3-0.5 to 1-12 Gy should be sufficient for the purpose. Currently, radiotherapy is a “can” recommendation, with a level 4 low evidence and a Grade C recommendation, according to the DEGRO S2 guideline. As part of a pilot study, we analyzed the impact and limitations of low-dose radiation therapy in the treatment of inguinal lymphatic fistulas.

Materials and Methods: As part of an internal quality control project, patients irradiated in the groin area after vascular surgery arterial occlusive disease (AOD) III-IV, repair of pseudo aneurysm or lymph node dissection due to melanoma were selected, and an exploratory analysis on retrospectively collected data was performed.

Results: Twelve patients (10 men and 2 women) aged 62.83 ± 12.14 years underwent open vascular reconstruction surgery for Stage II (n= 2), III (n=1), and IV (n=7) arterial occlusive disease (AOD), lymph node dissection for melanoma (n=1) or repair of a pseudoaneurysm (n=1). Surgical vascular access was obtained through the groin and was associated with a persistent lymphatic fistula, secreting more than 50 ml/day. Patients were irradiated five times a week up to a maximum of 10 fractions for the duration of the radiation period. 0.4 Gy per fraction were applied in the first 7 cases, while 5 patients were treated with a de-escalated dose of 0.3 Gy. The lymphatic fistula resolved in every patient, without higher grade complications.

Conclusions: Low-dose irradiation of the groin as a treatment option for persistent lymphatic fistula after inguinal vascular surgery is a possible therapeutic option to prevent wound infection and possible lower extremity amputation.



Fig. 1 Patient with lymphatic fistula after vascular surgery. Panel A lymphatic fistula after 4 weeks of surgery, with more than 300 ml per day; Panel B wound at the beginning of radiotherapy; Panel C after 6 days of radiation therapy, the fistula is closed