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**Case Report**



# Lymphangiosis Carcinomatosa in a Patient with Giant Cutaneous SCC: Cervicopectoral Advancement Flap in Combination with Tunnel Transposition Flap from the Back as Promising Treatment Approach?

Georgi Tchernev<sup>1,2\*</sup>, Ilija Lozev<sup>3</sup>, Ivan Pidakev<sup>3</sup>, Ivanka Temelkova<sup>1</sup>

<sup>1</sup>Medical Institute of Ministry of Interior (MVR), Department of Dermatology, Venereology and Dermatologic Surgery, General Skobelev Nr 79, Sofia, Bulgaria; <sup>2</sup>Onkoderma - Private Clinic for Dermatologic Surgery, General Skobelev 26, Sofia, Bulgaria; <sup>3</sup>Medical Institute of the Ministry of Interior, Surgery, Sofia, Bulgaria

## Abstract

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**\*Correspondence:** Georgi Tchernev, Medical Institute of Ministry of Interior (MVR), Department of Dermatology, Venereology and Dermatologic Surgery, General Skobelev Nr 79, Sofia, Bulgaria; Onkoderma-Private Clinic for Dermatologic Surgery, General Skobelev 26, Sofia, Bulgaria. E-mail: [georgi.tchernev@yahoo.de](mailto:georgi.tchernev@yahoo.de)

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**BACKGROUND:** One of the features characterising cutaneous SCC as high-risk is lymphovascular infiltration. The diffuse lymphangitic spread of carcinogenic cells is defined as the so-called lymphangitis carcinomatosa. In some cases, it is the only and first sign to alert the presence of an underlying malignancy. Therefore, biopsy in patients with clinical data on lymphangiosis carcinomatosa is of paramount importance.

**CASE REPORT:** We present a 77-year-old man with a progressively growing tumour formation in the area of the right shoulder, clinically suspected for SCC. During the dermatological examination, it was found that the lesion was surrounded by an infiltrated, perilesional relief shaft, which was histologically verified as lymphangitis carcinomatosa. The tumour formation was removed by radical excision and formation of a large skin-subcutaneous defect. To correct the surgical defect, a cervico-pectoral flap was performed, followed by tunnel transposition of the scapular graft through the deltoid muscle. The preoperative, ultrasound-marked artery was the arteria circumflexa scapulae dextra, which was used as the foot of the scapular graft and at the same time ensuring its blood supply. After the performed surgical flaps there remains a small uncovered surgical defect, which was left for subsequent secondary healing or full thickness mesh graft. The subsequent histological examination of the removed tumour formation detected the presence of squamous cell carcinoma.

**CONCLUSION:** Patients with the simultaneous presence of two different pathological cutaneous changes, located in the immediate proximity often require a multidisciplinary and complex treatment approach. For tumour formations close to the area of the neck, the cervical-pectoral flap provides optimal cosmetic recovery of the surgical defect. The tunnel transposition is an individualised, unconventional and difficult to implement the approach, which however showed a good therapeutic result. On the other hand, the preoperative histological examination of reddish peritumoral localised tentacles leads to 1) diagnosis of lymphangiosis carcinomatosa as well as 2) the subsequent precise determination of the limits of surgical excision, which is a large number of cases saves the need for secondary re-excision in these patients.

## Introduction

The therapeutic approach to advanced cancers located near the neck area is a great challenge because of the more complex anatomy and the need for complete and aesthetically acceptable reconstruction [1].

## Case Report

We present a 77-year-old patient with a rapidly growing tumour formation in the right shoulder. The lesion appears 10 months ago, progressively increasing its size and beginning to bleed. During the dermatological examination above the level of the right clavicle, an exophytic formation with an erosive surface and 13/7 cm size, clinically suspected of

spinocellular carcinoma, was found (Figure 1a and 1b). The lesion was surrounded by an infiltrated, perilesional, reddish embossed shaft (Figure 1a and 1b). The preoperatively performed cutaneous biopsy of the perilesional tissue revealed the presence of lymphangitis carcinomatosa. Radical excision of the tumour formation was performed by forming a large 20/30 cm skin-subcutaneous defect (Figure 1c and 1d).



Figure 1: a) and b) Exophytic formation above the level of the right clavicle, with an erosive surface, clinically suspected of spinocellular carcinoma; c) and d) Intraoperative aspect. The tumorous tissue after surgical resection; e), f) and g) Surgical defect recovered by cervico-pectoral flap

The surgical defect was recovered by cervico-pectoral flap (Figure 1e, 1f and 1g), followed by tunnel transposition of the scapular flap through the deltoid muscle (Figure 2a, 2b, 2c, 2d and 2f), the blood supply of which was provided by artery circumflexa scapulae dextra, branch of the subscapular artery. The scapular graft's foot is the separated artery circumflexa scapulae dextra, which was marked ultrasound before surgery (Figure 2a and 2b). There remains a small uncovered stretch of 3/2 cm surgical defect for subsequent secondary healing or full thickness mesh graft (Figure 2e and 2f).



Figure 2: a), b), c) and d) Tunnel transposition of the scapular flap through the deltoid muscle, the blood supply of which was provided by a.circumflexa scapulae dextra (Figure 2b); e) and f) Immediate postoperative result

The subsequent histological examination showed evidence of squamous cell carcinoma, diameter 8 cm, engaging the dermis and hypodermis, resection lines free of tumour infiltration. Staging identified spinocellular carcinoma Stage II (T2N0M0).

## Discussion

Advanced cutaneous spinocellular carcinoma hides the risk of metastases and relapses [2]. Apart from tumour thickness more than 2 mm and tumour size of more than 6 mm, other features characterising high-risk cutaneous SCC include poor differentiation, perineural or lymphovascular infiltration [2].

Lymphangiosis carcinomatosa is a disease that shows a diffuse lymphangitic spread of cancer cells [3]. Sometimes lymphangiosis carcinomatosa may be the first dermatological symptom revealing the presence of underlying malignancy [4].

Pre-operative histopathological testing of patients with lymphangiosis carcinomatosa helps, on the one hand, to precisely determine the limits of surgical excision and, on the other hand, leads to the saving of a possible second operation of the patients.

When it comes to large, advanced tumours near the neck, cervicopectoral flap provides a good therapeutic and cosmetic result [1].

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