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CASE REPORT

Complex facial reconstruction after removal of giant nasal ulcerated acantholytic squamous carcinoma

Daniela Vrinceanu[1], Ana Maria Oproiu[2,3], Mihai Dumitru[1,3], Madalina Georgescu[3], Mariana Costache[3,4]

[1]ENT Department, Emergency University Hospital, Bucharest, Romania

[2]Plastic Surgery Department, Emergency University Hospital, Bucharest, Romania

[3]"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

[4]Department of Pathology, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

ABSTRACT

BACKGROUND. Excision of facial cutaneous carcinomas requires further reconstruction in a combined team with plastic surgeons. Among the traditional risk factors, the unprotected occupational exposure to sunlight can be identified. Giant masses at the level of the nose are frequently squamous carcinomas in origin. Moreover, repeated tumor trauma favours local-regional and remote extension.

MATERIAL AND METHODS. We present step by step the surgical management of an old woman with a nasal mass of 58/36/20 mm. Also, the patient presented right genian tumefaction of approximately 6 months in evolution.

RESULTS. The patient was submitted to surgical resection with free margins, leaving a considerable nasal and genian groove defect. Teaming up with the plastic surgeon, we applied complex reconstruction techniques with a satisfactory aesthetic and functional result. The histopathologic diagnosis confirmed our suspicion of an acantholytic squamous cell carcinoma with lymph nodes metastasis.

CONCLUSION. Our case exhibited traditional risk factors, living in a rural environment. The tumor degree of aggressiveness was increased by repeated self-inflicted trauma. Late presentation to healthcare services implied complex facial reconstruction for the combined resection of the nasal tip and genian lymph node.

KEYWORDS: cutaneous, squamous cell carcinoma, nose, adenopathy, histopathology.

INTRODUCTION

Facial skin carcinomas are frequently associated with occupational exposure to ultraviolet radiation[1]. Basocellular carcinomas (BCC) are considered to be more frequent in the two upper thirds of the face, while squamous cell carcinomas are more frequent in the lower third of the face[2]. Basocellular carcinomas represent the less aggressive variant, with local extension, but with no remote metastases[3]. Squamous carcinomas represent the aggressive variant, with local-regional and remote extension, as the tumor trauma and self-induced trauma favours the extension.

The most frequent clinical form of nasal pyramid squamous cell carcinoma is the exophytic form[4]. The trauma produced to an exophytic tumor accelerates ulceration, stimulates tumor growth, by being an irritating pin for neoplastic cells, and determines tumor microemboli to be sent through the tumor vessels to the lymphatic and vascular drainage stations[5]. In case of a giant tumor of the nasal pyramid, trauma determines the regional extension, and the lymph nodes on the facial vein path represent the first lymphatic station[2]. In the literature, a giant tumor is considered exceeding 5 cm[6].

Corresponding author: Mihai Dumitru, MD, PhD, ENT surgeon, Assistant Professor, Emergency University Hospital of Bucharest, Carol Davila University of Medicine and Pharmacy, Sarandy Frosa 1, Bl. 33, Sc. A, Ap. 12, Bucharest, Romania
Phone: +40721752318
e-mail: orldumitrumihai@yahoo.com
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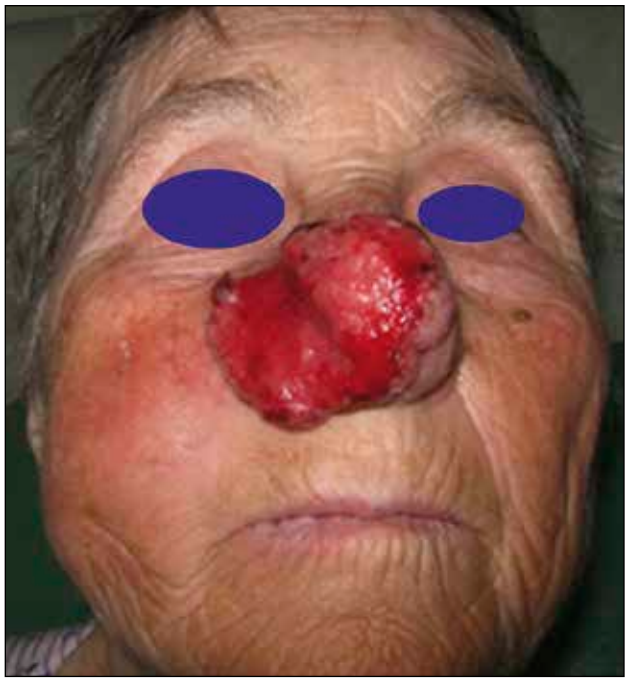

Figure 1 Preoperative aspect, with nasal pyramid cutaneous tumor and right genial tumefaction (adenopathy).

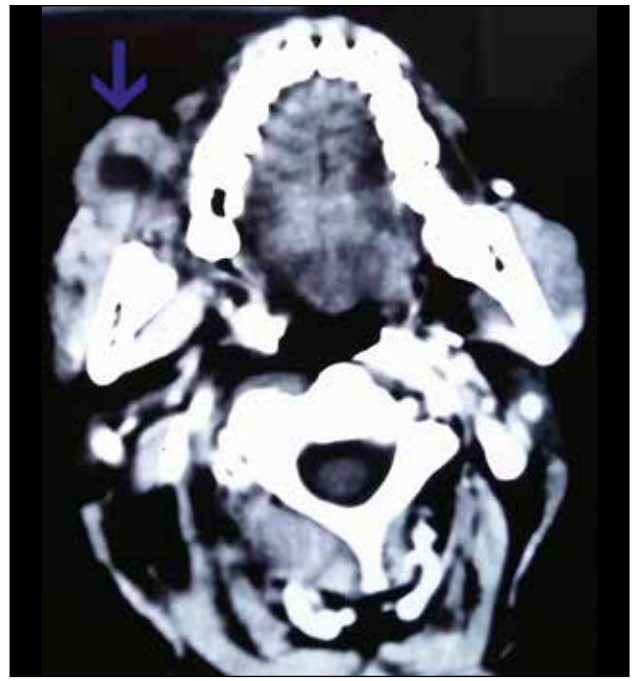

Figure 2 CT scan revealing the extension of the mass and associated lymph node.

Figure 3 Intraoperative aspect with the ablation of the nasal pyramid tumor.

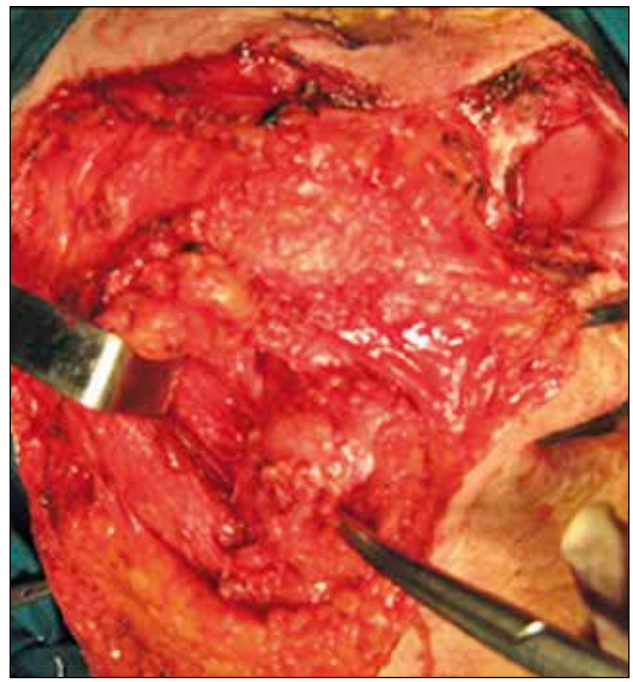

Figure 4 Intraoperative aspect with the ablation of the right genian adenopathy.

CASE REPORT

We present the clinical case of an 81-year-old female patient, with a giant nasal pyramid bleeding tumor with a 2-year evolution, repeatedly traumatized with frequent episodes of bleeding and 6-month right genian tumefaction (Figure 1). The female patient comes from a rural environment with an occupational exposure to the sun for more than 50 years as she worked in agriculture.

The clinical exam showed an ulcerated tumor of approximately 5 cm in diameter, starting from

Figure 5 Ablation specimen – the nasal tumor.

Figure 7 Postoperative aspect after 48 hours.

Figure 6 Intraoperative aspect, after reconstruction with a rotated right cervical facial flap.

the right nasal wing with extension to the nasal pyramid skin, but without the invasion of the nasal fossae. The right genian tumefaction corresponded to a genian adenopathy less mobile in depth and on skin. The CT scan exam with I.V. contrast showed an intensely iodophilic tissue expansion process localized at the level of the right nasal wing of 49/17 mm, without changes in the adjacent bone structure. A 25/19 mm necrotic genian adenopathy was localized in front of the right masseter muscle compressing the facial vein (Figure 2). Among the associated pathologies, we notice severe carotid atheromatosis with hypertension under treatment.

A mixed team with the plastic surgeon performed the surgical resection of the nasal pyramid tumor with the subtotal amputation of the nasal pyramid and the ablation of the right genian lymph node, within oncologic limits (Figures 3, 4, 5). The resulting tissue defect was covered by a right cervical-facial rotated flap (Figure 6). The surgery lasted 4 hours, with a bleeding of approximately 300 ml. Taking into consideration the absence of neck lymph nodes and the necessity of maintaining the viability of the cervical flap, the neck dissection was not performed.

The local postoperative evolution was favourable with the remission of the edema and hematomas (Figure 7). Systemic antibiotic treatment was initiated: cephalosporins 3rd generation for 10 days + ciprofloxacin for 7 days + metronidazole for 5 days. vAt 72 hours post-surgery, the patient had an atrial flutter episode for which she was given low molecular weight heparin and subsequently a beta-blocker and statins. She was discharged upon surgical healing after 14 days.

Intraoperatively, we performed a fresh frozen

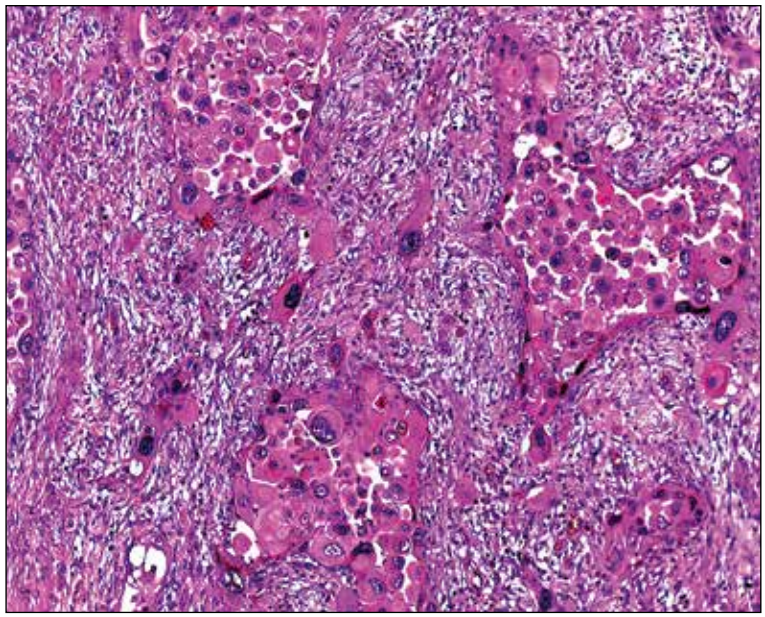

Figure 8 Histopathologic aspect of the nasal tumour – acantholytic squamous cell carcinoma.

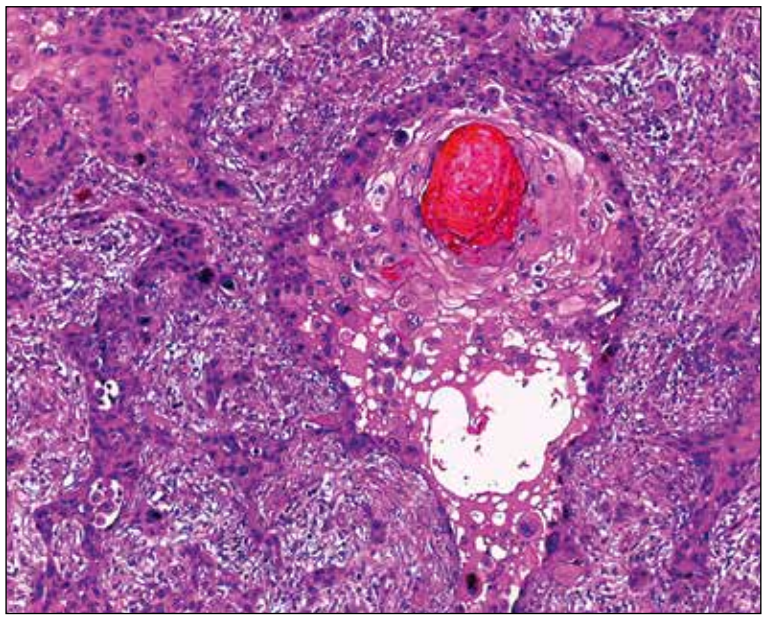

Figure 9 Histopathologic aspect of the right genian mass – lymph node metastasis of the acantholytic squamous cell carcinoma.

pathology exam with the control of surgical margins until we obtained negative margins. This is why the surgery consisted in the subtotal amputation of the nasal pyramid. The paraffin-embedded pathology exam of the nasal pyramid tumor showed, macroscopically, a 55/44/6 mm skin fragment with a sessile exophytic formation with irregular surface, of whitish colour, increased consistency, 58/36/20 mm; microscopically, an ulcerated acantholytic squamous cell carcinoma in some places up to the deep excision limit (Figure 8). The paraffin-embedded pathology exam of the genian mass showed, macroscopically, a tissue fragment with a nodular appearance, of whitish colour on section, increased consistency, 37/32/28 mm; microscopically, a lymph node metastasis of acantholytic squamous cell carcinoma (Figure 9). The TNM classification was pT3pN2aMx.

The patient refused the postoperative radiotherapy or adjuvant chemotherapy. She was reexamined at 1, 6 and 12 months after surgery: there was a right nasal neo-wing necrosis of ap-

proximately 2/1 cm and, apart from that, healed wounds, without palpable genian or cervical lymph nodes and with no local relapse. The resulted aesthetic defect may be easily covered with a small simple suture.

DISCUSSIONS

Squamous cell carcinoma is the second most frequent cancer type of the cutaneous layer of the nasal pyramid, after BCC[2]. The association with occupational exposure to ultraviolet radiation is frequent[1]. The most frequent localization at the face level is in the lower third, and on the nose level on the back of the nose and on the nose wings[3]. The most frequent clinical forms are cutaneous horn, exophytic form with a red, infiltrated base and the budding or ulcerated form developing on a cutaneous horn. Clinically, it manifests itself as a nodular lesion, hard in the beginning, with rapid growth and ulceration afterwards[4]. The self-inflicted trauma of the tumor accelerates the ulceration, the increase in size and the local-regional extension[5]. Our female patient repeatedly self-traumatized the tumor, which in two years of evolution reached impressive sizes and determined the occurrence of the massive genian lymph node.

Regional lymph nodes are relatively common and affect also the pretragic parotid lymph nodes and submandibular lymph nodes[3]. The genian adenopathy presented by our patient was in the drainage territory of the submandibular lymph nodes, at the level of the lymph node group accompanying the facial vascular pedicle.

The positive diagnosis is made by a paraffin-embedded pathology exam. The differential diagnosis can be done at the beginning with basal cell carcinoma, with precancerous lesions and keratoacanthoma[5].

The treatment consists in a large excision including the bone and the subjacent cartilage. Lymph node removal is performed out of necessity in case of clinically palpable lymph nodes[7]. Due to the particular anatomy of the nasal pyramid, it is difficult to achieve negative safety margins. Surgical positive margins are indications for adjuvant radio- and chemotherapy and may lead to compromising the flaps used for the reconstruction of the postoperative defect[8]. The subtotal or total amputation of the nasal pyramid is frequently required, with a reconstruction after 1 year of evolution without relapse[7,9]. Our patient was 81 years old and she came from a rural environment, with a certain type of social and religious behaviour where the amputation of the nasal pyramid without immediate reconstruction was out of the question. We had to perform the resection of the tumor within oncology limits, the difficult ablation of the genian adenopathy; we had to build an ample cervical-facial flap over more than two hours of dissection[10]. We need to recall the fact that the patient had a severe cervical carotid atheromatosis, therefore we decided not to perform the dissection of the neck and the immediate covering of the defect, in order to save the flap blood vessels[11,12].

The prognosis of the nasal pyramid squamous cell carcinoma is poorer than the prognosis of the BCC due to the local-regional extension, with lymph node and remote metastases[7,13]. In the case we presented we consider that the oncology outcome was good, with the absence of local-regional relapse at 1 year, and with the absence of liver or lung metastases.

The histopathology exam upon freezing with the control of safety margins is decisive for ensuring negative operative margins with a high chance of favourable evolution[8].

CONCLUSIONS

We presented the clinical case of an 81-year-old female patient, with a giant nasal pyramid vegetative tumor with a 2-year evolution, repeatedly self-traumatized with frequent tumor bleeding. The patient came from a rural environment, with an occupational exposure to the sun for more than 50 years. The patient also had a right genial adenopathy for 6 months. The surgery aimed the ablation of the tumor and of the lymph nodes within the safety limits, as well as covering the substance defect.

The patient's age over 80 and her associated vascular pathology restricted the radical dissection of the neck, which was clinically negative. The patient refused adjuvant radiotherapy and chemotherapy, but after 12 months she showed no local-regional recurrence, so that sometimes the surgery is the best we can get to control a giant nasal pyramid tumor.

The pathology exam upon freezing with the control of safety margins is decisive for ensuring negative operative margins with a high chance of favourable evolution.

Ethical approval: All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance

with the ethical standards laid down in the 1964 Declaration of Helsinki.

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Conflict of interest: The authors have no conflict of interest.

Contribution of authors: All authors have equally contributed to this work.

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