

# GENERALIZED PUSTULAR PSORIASIS IN ASSOCIATION WITH SQUAMOUS CELL CARCINOMA OF THE HYPOPHARYNX

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## GENERALIZOVANA PUSTULOZNA PSORIJAZA UDRUŽENA SA SKVAMOCELULARNIM KARCINOMOM HIPOFARINKSA

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### ABSTRACT

*Pustular psoriasis is an uncommon form of psoriasis consisting of widespread pustules on an erythematous background. Very rarely pustular psoriasis represent a paraneoplastic dermatosis. In this report we describe a case of generalized pustular psoriasis (GPP) associated with advanced, inoperable, metastatic squamous cell carcinoma of the hypopharynx. We suggest that physicians should be alert for the worsening of existing psoriasis or formation of novel psoriasisiform eruptions and should undertake clinical evaluation of possible neoplastic disease.*

**Keywords:** Pustular psoriasis, squamous cell carcinoma, paraneoplastic dermatosis

### SAŽETAK

*Pustularna psorijaza je retka forma psorijaze koja se manifestuje diseminovanim pustulama na eritematoznoj osnovi. Veoma retko pustulozna psorijaza predstavlja paraneoplastičnu dermatozu. U ovom radu predstavljamo slučaj generalizovane pustulozne psorijaze udružene sa uznapredovalim, inoperabilnim skvamocelularnim karcinomom hipofarinksa. Smatramo da lekari treba da uoče pogoršanje postojeće psorijaze ili pojavu nove psorijaziformne erupcije sa ciljem da se klinički evaluira moguć neoplastički proces.*

**Ključne reči:** Pustularna psorijaza, skvamocelularni karcinom, paraneoplastična dermatoza

### ABBREVIATIONS

GPP-generalized pustular psoriasis



### INTRODUCTION

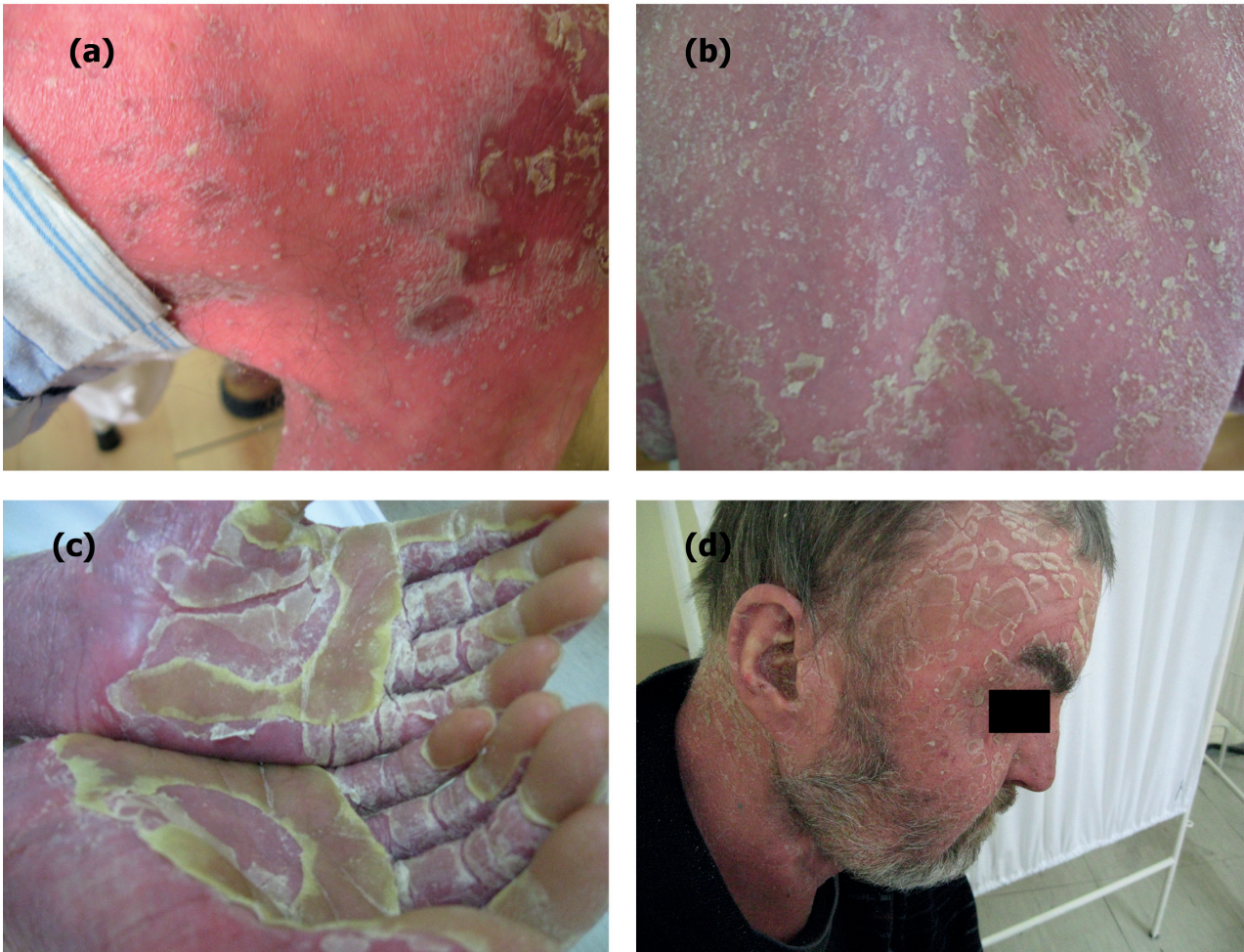
Psoriasis is a chronic, relapsing skin disease presented in majority of cases with widespread erythematous papules and plaques covered with a scale. Very rarely psoriasis can be manifested with widespread pustules on an erythematous ground localized on the whole body surface. These condition is known as a generalized pustular psoriasis and it is an uncommon form of psoriasis (1).

Paraneoplastic dermatoses represent a group of cutaneous disorders related to underlying internal malignancies. In available literature psoriasis, especially it's pustular form is rarely described in association with malignancy (2-6).

In this report we describe a case of generalized pustular psoriasis (GPP) associated with advanced, inoperable, metastatic squamous cell carcinoma of the hypopharynx. To the best of our knowledge this is the first report of GPP accompanied by squamous cell carcinoma.

### CASE REPORT

A 46-years old male with no personal and/or family history of psoriasis was referred to Department of Dermatology. He was febrile, malaise, in distress and dehydrated. Clinically, generalized bright erythema with individual and coalescent pustules localized on whole body surface was present (Fig.1a). The face and scalp were deep red in color and covered by thick yellowish scales, while on palms and soles lamellar thick scale was observed (Fig.1b,1c). No mucosal involvement was present. Physical examination revealed a tumorous formation fixed to skin and underlying structures on right side of the neck (Fig.1d). Patient appeared undernourished, with poor personal appearance. He stated that skin redness began ten days before referring to the dermatologist. He denied taking any drugs and medication but admitted that he is a heavy cigarette smoker and alcohol abuser.



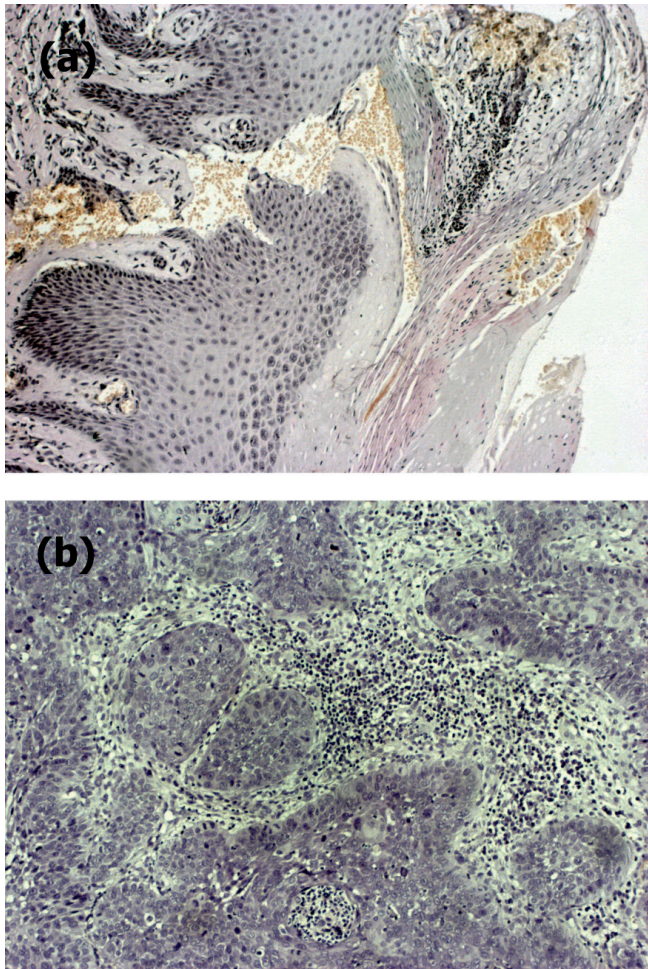
**Figure 1.** Clinical presentation at admission showing (a) Bright erythema with individual and coalescent pustules, (b) Generalized erythema on the back with scales, (c) Thick yellowish, laminar scales on palms, (d) Face and scalp covered by thick scales and tumor formation on right side of the neck.

We have conducted various laboratory studies. Complete blood count has showed mild anaemia and leukocytosis with predominance of neutrophils. Sedimentation rate was elevated, as well as C-reactive protein, while procalcitonin was within normal values. The peripheral smear showed no abnormalities. Biochemical analyses showed elevated urea and creatinine levels, hypoproteinemia and hypoalbuminemia, elevated hepatic enzymes, and decrease iron serum levels. Other biochemical parameters as well as urine analyses were normal. Fecal occult blood tests were negative. His blood cultures were negative. Cultures for bacteria and fungi from the pustules did not reveal any organisms. Carcinoembryonic antigen (CEA) and CA 19-9 were within normal levels. The abdominal ultrasound and chest radiography showed no abnormalities.

Since tumorous formation fixed to skin and underlying structures on right side of the neck was present otolaryngologist was consulted. Otorhinolaryngologic examination revealed infiltrating tumorous outgrowth of the right lateral wall of the hypopharynx which also invades tongue and oral cavity base. Ultrasound of the neck showed metastatic lymph nodes on both sides of the neck and solid hypo and hyperechoic formation on the right side which is in continuity with the endopharynx.

Biopsies were obtained from the tumorous tissue and skin. Skin biopsy showed epidermal hyperkeratosis, parakeratosis, elongation of rete ridges and subcorneal macropustula with numerous neutrophils, dilated capillaries and perivascular mononuclear infiltrate in the edematous superficial dermis (Fig. 2a). Histopathological examination of hypopharynx tumor disclosed invasive squamous cell carcinoma, moderate differentiated, with incomplete keratinization (Fig. 2b).

After the admission, patient was treated with antibiotics (consecutively amoxicillin, gamamycin and amoxicillin/clavulanic acid), corticosteroids (methylprednisolone and prednisolone), supportive therapy (antipyretics, gastro-protective agents, prevention of alcohol withdrawal syndrome, intravenous fluid infusion), topical emollients. Ten days after admission patient's clinical state was improved and retinoid therapy (40 mg of acitretin daily) was started. Three weeks later he was transferred from our department to Oncology department in order to start with cancer treatment (radical radiotherapy, 66Gy in 33 fractions with chemotherapy with cisplatin). Dermatological checkup, two weeks after, showed generalized erythema with less prominent scales then on admission and no pustules flares. He was released from Oncology department with advice



**Figure 2.** Histopathologic findings (a) Pustular psoriasis, epidermal hyperkeratosis, parakeratosis, elongation of rete ridges and subcorneal macropustula with numerous neutrophils. Dilated capillaries and perivascular mononuclear infiltrate in the edematous superficial dermis. (Hematoxylin & eosin stain, original magnification,  $\times 200$ ), (b) Invasive squamous cell carcinoma, moderate differentiated, with incomplete keratinization (Hematoxylin & eosin stain, original magnification,  $\times 200$ ).

to continue his radiotherapy and chemotherapy in Oncology Daily Center. But he never again returns to oncologist, otolaryngologist or dermatologist. His outcome remains unknown to all specialist involved in his treatment.

## DISCUSSION

Paraneoplastic dermatoses represent a group of cutaneous disorders related to underlying internal malignancies. Their clinical appearance and course may range from specific dermatosis characteristic of a particular cancer to entirely atypical eruption (7, 8). Some paraneoplastic dermatosis could respond to non-causal therapy options, such as topical and systemic corticosteroids but usually cancer treatment is required for skin disorders remission (7).

Psoriasis, especially generalized pustular psoriasis is uncommon as a paraneoplastic dermatosis (6) but there are reports in literature which suggest that psoriasis can de-

velop at the onset of a tumor, improved after tumor treatment or exacerbated when tumor relapsed or metastasized (2-5). Development of psoriasis and psoriasiform eruption associated with malignant tumours is not entirely clarified but possible mechanisms could be growth factors and cytokines produced by malignant cells (8-10).

Our patient denied any history of psoriasis. He came to our department for the first time, had no medical records of previous examination nor treatment, which psoriatic patients usually have. One can argue that heavy alcohol abuse and cigarette smoking could work as a trigger in this case. However, it seems appropriate to hypothesize that in our case generalized pustular psoriasis was skin manifestation of underlying malignancy. Late onset of the disease at the age of 46, rapid course of the disease (confirmed by patient's relative who also stated that he had no skin related problems before) and slight improvement of skin lesions after radiotherapy and chemotherapy were commenced suggest our hypothesize.

We present this case in order to emphasize that appearance and behavior of psoriasis and pustular psoriasis could be linked to malignancy, so dermatologist should undertake clinical evaluation of possible neoplastic disease.

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