



Imiquimod 5% Cream in Topical Treatment of Facial Basal Cell Carcinoma

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SUMMARY

Introduction: Basal Cell Carcinoma (BCC) is a non-melanocytic skin neoplasm originating from the cells in the basal epidermal layer, hair follicle shell or other skin adnexa. It is the most frequent skin malignancy. Treatment is surgical or nonsurgical.

Cases reports: Herein we present 2 patients with superficial type of BCC and actinic keratosis of the face. The patients have been diagnosed by dermoscopy DermLite dermatoscope by 3Gen Inc. manufacturer, and skin biopsy has been performed for histopathological examination. The superficial BCC of the face has been treated with 5% Imiquimod cream once a day for 5 days in a week, during 4 weeks, with erosions and crusts until complete skin restoration.

Conclusion: Based on these case reports, it could be concluded that 5% Imiquimod cream is safe and effective treatment for superficial BCC and represents an optimal treatment to achieve good clinical and esthetic effect for the patients.

Keywords: Basal Cell Carcinoma, actinic keratosis, Imiquimod, toll-like receptor

INTRODUCTION

Basal cell carcinoma (BCC) is a non-melanocytic skin tumor originating from the cells in the basal epidermal layer, hair follicle shell or other skin adnexa. It is the most frequent skin malignancy in Caucasian population, with skin phototype 1 and 2 [1]. It appears after the age of 60 years, rarely in younger people, sometimes more in men because of the professional occupation with sun exposure [2].

Typical localization could be in photo exposed skin, such as the face, head /neck or the trunk, but mainly on the nose or cheek, usually with actinic keratosis that could evolve into squamous cell carcinoma (SCC). Clinical presentation may be different, like superficial

or nodular type, rarely ulcerating, or sometimes pigmented, resembling melanocytic lesions [3, 4]

The tumor can be diagnosed by dermoscopy and verified by histopathological examination of the excised tissue [5].

The treatment is:

a) Surgical excision is the first choice therapy in case of the large tumor, sometimes with plastic surgery technique [6];

b) Nonsurgical:

1) Imiquimod 5% cream as immunomodulator, targeting toll like receptors (TLR) 7, stimulates skins own immunity. This agonist TLR 7 induces increased production of interferon-alpha, interleukin-12, tumor necrosis factor-alpha and a Th1 prone immune response. Also,

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it induces release of calcium from the internal store in cells, independently of TLR7 pathway, and causes pruritogenic effect. It is used for superficial tumors of the face [7, 8, 9,10];

2) 5-fluorouracil topical cream with cytotoxic effect, that inhibits DNA synthesis by blocking conversion of deoxyuridylic acid to thymidylic acid by the cellular enzyme thymidylate synthase. This method is used for superficial lesions of the trunk / extremities [11];

3) Photodynamic therapy (PTD) uses specific light waves to photoexcited molecules in neoplastic cells. 5-aminolevulinic acid is photo reactive molecule for PTD, and it is activated by blue light [12];

4) Systemic retinoids could be found in the literature as a method of treating BCC, but their use is very rare because of many side effects [13];

5) Radiotherapy used to be the first choice treatment for BCC in the past. It takes a long time for procedure that is expensive and toxic, but could be recommended for the elderly patients with low-dose radiation [14];

6) Cryotherapy as a cheap and easy to access therapy has limited usage in small number of patients for treating BCC with undesirable effect of tumor growth if it is not removed (completely)[15].

female patient 53 years and skin phototype 1, with positive family history of epithelial tumors. Tumefaction of the left cheek, 6 mm in diameter, was found by clinical examination. The tumor was growing slowly for the last 6 months, with occasional bleeding and crusting. Also, several actinic keratosis has been observed in photo exposed skin on the nose and cheek.

Each patient has had dermatoscopy performed by *DermLite* dermatoscope and partial skin biopsy of the tumor and surrounding skin for histopathological diagnosis. Dermatoscopy (Fig 1 and 2), showed tumors as a non-pigmented lesion, with arborized blood vessels, structure less areas.

THE AIM

The aim of this paper is to show possibilities and results of non-surgical topical treatment of superficial BCC by Imiquimod 5% cream.

CASES REPORTS

Patients with manifested tumors of the photo exposed skin have been clinically examined in the Department of Dermatovenerology, Clinical Hospital Center, Zemun and City Department of Dermatovenerology:

1. Case of an elderly patient with superficial tumor of the face. A male patient, 72 years old has been clinically examined and tumor of the forehead was found. The tumor was 7x4 mm in diameter, sometimes with shallow erosion and tiny crust, growing slowly for several months. Two similar tumors located around nose and mouth have been excised 7 and 4 years ago and histopathologically verified as BCC.

2. Case of a superficial tumor of the face in a

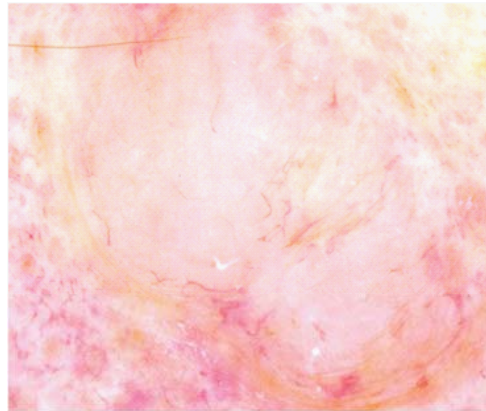


Fig 1. Dermatoscopy findings of BCC in case 1

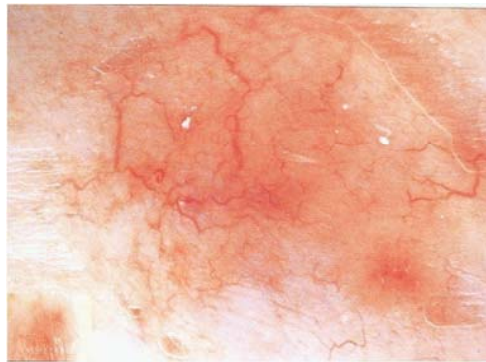


Fig 2. Dermatoscopy findings of BCC in case 2



Fig 3. Dermatoscopy findings of actinic keratosis in case 2

Fig 4. Case 1 - the skin condition in 4th week



Fig 5. Case 1- without recidivant tumor after 6 months



Fig 6. Case 2 - the skin condition in 4th week



Fig 7. Case 2 - after 3 months without recidivant tumors and actinic keratosis



Dermatoscopy of the actinic keratosis (Fig 3) showed uniform symmetric distribution of light brown color around follicular openings.

Histopathological examinations diagnosed tumors as superficial BCC with immature basal cells protruding towards dermis.

The superficial BCC of the face together with actinic keratosis has been treated with 5% Imiquimod cream once a day for 5 days in a week, during 4 weeks, (fig 4, fig 6) until complete restoration of epithelial layer instead of tumor (fig 5- 6 months after the therapy; fig 7- 3 months after the therapy without recidivant tumors). The patients have had local skin irritation such as redness, edema, erosion with crust and itching sometimes.

DISCUSSION

It is necessary to monitor the skin condition of those patients once diagnosed with BCC by regular clinical and dermatoscopy examinations in the following years. The prevention of new BCC is conducted from April to October every year by using sun protection factors (SPF) creams on the photo exposed skin, together with mechanical protection by clothing, ultraviolet filtered sunglasses. Sunbathing is absolutely forbidden in the interval from 11 am till 15 pm [2]. Which method of tumor therapy should we choose depends on the age and general condition of the patient, the diameter, localization and type of the tumor, also. The aim of the treatment is good esthetic effect that could be obtained by optimal cooperation with the patient [3]. Those patients treated by topical Imiquimod 5% cream have experienced local skin reactions on the application site, and that are the most common adverse reactions that corresponded positively with the immune response [16]. They should be advised to carry out thorough hygiene measures before and after cream applying.

The advantages of this topical treatment are many: affordable cost of the therapy that is conducted in domestic environment at home, the possibilities of removal of both manifested and invisible actinic keratosis.

CONCLUSION

Our findings support the results of clinical trials that showed the Imiquimod as a safe and effective treatment option of superficial BCC, which might be able to prevent the disease progression to the squamous cell carcinoma [10, 11, 17, 18].

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Primena imiquimod 5% krema u topikalnom lečenju bazocelularnih karcinoma kože lica

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KRATAK SADRŽAJ

Uvod: bazocelularni karcinom (BCC) je nemelanotični tumor kože, koji potiče iz ćelija bazalnog sloja, folikula dlake ili drugih adneksa kože. To je najčešći maligni tumor kože a leči se hirurškim ili nehirurškim putem.

Prikazi slučajeva: predstavljamo 2 pacijenta sa supeficijalnim tipom BCC -a i aktiničnim keratozama lica. Dijagnoza je postavljena dermoskopski, pomoću DermLite dermoskopa (proizvođač 3Gen Inc.), kao i biopsijom i histopatološkim pregledom. Površni BCC kože lica tretirani su Imiquimod 5% kremom jednom dnevno, 5 dana tokom 4 nedelje, sa pojavom erozija i krasta, do potpunog zarastanja kože.

Zaključak: Na osnovu ovih prikaza slučajeva, može se zaključiti da je Imiquimod 5% krem(a) siguran i efikasan metod lečenja površnih BCC, kao i da je ovo optimalan metod lečenja kojim se postiže dobar klinički i estetski efekat.

Ključne reči: bazocelularni karcinom, aktinična keratoza, Imiquimod, toll-like receptor

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