



Case Report

Acneiform skin lesions associated with cetuximab therapy: Report of two cases

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ABSTRACT

Cetuximab, is an IgG1 chimeric monoclonal antibody type of epidermal growth factor receptor (EGFR). It is most commonly prescribed for metastatic colorectal cancer, administered alone or in combination with irinotecan-based chemotherapy regimens (Lee et al., 2008; Segaert et al., 2005; Segaert and Cutsem 2005; Scope et al., 2009). Acneiform eruption is the most common adverse effect with 80% of incidence (Segaert and Cutsem 2005; Lee et al., 2008). We report two cases of severe acneiform eruption induced by cetuximab with metastatic colorectal cancer.

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Key Words :

Cetuximab

Acneiform Eruption

Colorectal Cancer

Irinotecan

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Side Effect

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1. Introduction

Epidermal growth factor has an important role in the regulation of proliferation and differentiation in epidermal keratinocytes. Cetuximab, is an IgG1 chimeric monoclonal antibody type of epidermal growth factor receptor (EGFR). That has been approved for EGFR-expressing metastatic colorectal carcinoma. It can cause side effects including acneiform eruption, asthenia, abdominal pain, nausea and vomiting. Acneiform eruption is the most common side effect with 80% of incidence. We report two cases of moderate acneiform eruption induced by cetuximab with metastatic colorectal cancer (Segaert et al., 2005; Lee et al., 2008; Scope et al., 2009).

2. Case report

Patient 1, a 56-year-old man, with metastatic colorectal cancer was referred to our dermatology clinic with skin lesions on the face, which had developed three days after the first therapy with cetuximab and irinotecan. He was complaining of itching and pain. In dermatological examination, there were multiple erythematous papules and pustules on the face and upper trunk but not comedones (Fig. 1). No hair and nail abnormalities were observed. Therapy was initiated with topical benzoyl peroxide

and clindamycin cream, emolient and antihistaminic (Loratadine) were initiated. The lesions were improved with this treatment.

Patient 2, a 50-year-old man, had metastatic colon cancer. Three days after the initial treatment with cetuximab and irinotecan, the first skin lesions of itchy erythematous papules and pustules occurred on the face and upper trunk (Fig. 2). Hair and nail abnormalities were not observed. Therapy was initiated with topical benzoyl peroxide and erythromycin cream, emolient and antihistaminic (Loratadine) were initiated. The lesions were improved with this treatment.

Based on the clinical findings and the fact that none of the patient's other medications has been associated with these symptoms, a diagnosis of cetuximab-induced acneiform eruption was made.

3. Discussion

Cetuximab is a chimeric monoclonal antibody and plays an important role inhibiting cell proliferation, angiogenesis, and the formation of distant metastasis while inducing cell apoptosis (Segaert and Cutsem, 2005; Vaccaro, 2008). Cetuximab is most commonly prescribed for metastatic colorectal cancer, administered alone or in combination



Fig. 1: Patient 1, a 56-year-old man, had multiple erythematous papules and pustules on the face.



Fig. 2: Patient 2, a 50-year-old man, had multiple erythematous papules and pustules on the face.

with irinotecan-based chemotherapy regimens (Lee et al., 2008).

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Many normal epithelial tissues including the skin and hair follicle express EGFR. It regulates the growth and division of cells, the repair of cellular damage and the movement of cells within surrounding tissue. It is also found in many human cancers including those of the head and neck, colon and rectum. EGFR leads to tumour growth, increased resistance to chemotherapy or radiotherapy, and metastasis formation (Vaccaro, 2008).

Dermatologic side effects of cetuximab include acneiform eruptions, seborrhoeic-like dermatitis, trichomegaly, eczema, xerosis, desquamation, paronychia, hair changes, telangiectasia and hyperpigmentation (Segaert et al., 2005; Suh et al., 2006; Vaccaro, 2008). Acneiform skin eruption is the most common adverse event of cetuximab therapy with an incidence of about 80 % (Gutzmer et al., 2005; Segaert et al., 2005). Itchy erythematous follicular papules and pustules without comedones is predominantly on the seborrhoeic areas such as face, neck, retroauricular area, shoulders, scalp and upper trunk. Skin lesions of EGFR may be accompanied by pruritus. The onset of the eruption is usually within one to three weeks of starting therapy. In our patients, similar acneiform eruptions developed immediately in third day after the first treatment of cetuximab and irinotecan. Cutaneous side effects of cetuximab are reversible. Interruption of cancer treatment is usually unnecessary. Because of this side effect, treatment breaks and dosage reduction are needed in 5 % to 18 % of patients on EGFR inhibitors (Scope et al., 2009). It is important to inform the patients about the cutaneous reactions after the administration of cetuximab.

For the treatment of mild reaction, topical metranidazole, erythromycin, clindamycin, pimecrolimus or benzoylperoxide can be started (Segaert and Cutsem 2005; Scope et al., 2009). If itch is present, an oral antihistamine (cetirizine, loratadine, hydroxyzine) can be used (Segaert and Cutsem 2005). Oral tetracyclines (minocycline, lymecycline, doxycycline) or oral isotretinoin can be initiated in severe reactions (Gutzmer et al., 2005; Suh et al., 2006). To prevent xerosis, an emollient cream can be advised.

Although cutaneous adverse effects including acneiform eruption, of cetuximab therapy were seen commonly, these two patients were the first cases who admitted to our dermatology clinic.