

# Macula Erythematous Rash Due to Temozolomide Involving Head and Neck Region Only

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## Abstract

The main aim of the present study was to investigate a case of macula erythematous rash involving head and neck region only associated with the use of temozolomide in the treatment of glioblastoma multiforme-brain tumor-grade IV-WHO. In the present case study, we presented a case of a patient with glioblastoma multiforme-brain tumor-grade IV-WHO. Patient after surgery was followed by radiotherapy and chemotherapy, and after cycles of chemotherapy with temozolomide came with the case of macula erythematous rash.

## Background

In adults, glioblastoma is the most well-known forceful essential Central Nervous System (CNS) tumor which represents 45.6% of all harmful CNS tumors, which has an occurrence of 3.19 for every 100,000 [1]. For the treatment of glioblastoma, the current level of treatment is surgical resection took after by adjuvant temozolomide and accompanying radiotherapy. The expansion of temozolomide to radiotherapy essentially enhances general median survival and progression free survival contrasted with radiotherapy alone. Temozolomide is an alkylating agent and is, for the most part, an all-around endured treatment with exhaustion, thromboembolic occasions, and lymphopenia as the most widely recognized side effects. Grade III or IV myelosuppression is a generally uncommon symptom announced in 4% of patients [2].

We reported a probable case of macula erythematous rash due to temozolomide involving head and neck region only. Causality and seriousness of the response were evaluated utilizing the Naranjo and Hartwig scales, individually [3,4].

## Case Description

A case of 55-year-old female patient, who was apparently well one month back. Then she developed headache, insidious in onset, generalized on and off type, throbbing type of headache, no any relieving and aggravating factors, and also complained

of decreased appetite. There was no history of fever, nausea, vomiting, loss of consciousness, and abnormal body movement.

She had history of decompressive surgery for type I chiral malformation on 12/12/2013. She also had history of post-operative meningitis, which was managed conservatively. There was no any history of medical illness in the past. Histopathological features were consistent with glioblastoma multiforme (WHO Grade IV).

Patient was admitted for further evaluation and management. She had a severe refractory headache when she underwent investigations. She had left temporal high-grade lesion and operation was done on 21/05/2017. Post-operatively, she was managed with IV antibiotics, intravenous fluids, proton pump inhibitors (Pantoprazole 40mg), analgesics and inj. dexamethasone.

After surgery, she was referred to Nepal Cancer Hospital and Research Centre and started with chemotherapy before starting radiotherapy during Coordinated Reset simulation. Patient after surgery was followed by radiotherapy and chemotherapy. After cycles of chemotherapy with temozolomide she was on oral capsule temozolomide 250 mg.

On 17/01/2018, she visited the clinic complaining dry mouth, erythema, and mucositis from 03/01/2018. On casualty assessment, we assessed it as "probable" due to temozolomide. On observation, it was diagnosed as macula erythematous rash involving head and neck region which was painful and with the suspected vasculitis. She was prescribed with Prednisolone 20 mg, Cloben G (Combination of Clotrimazole, Beclomethasone, Gentamycin) which has an antibacterial, Antifungal and anti-allergic action cream and Antiseptic pain relieving gel (Gel containing Choline Salicylate and Benzalkonium Chloride Solution) was given. After a follow-up after a week i.e. on 24/01/2018, patient's sign and symptoms was resolved with the prescribed medicines.

## Discussion

The detailed dermatologic reactions of temozolomide are deficient however it comprises of urticaria, desquamative and maculopapular rash, alopecia, Stevens-Johnson disorder/harmful epidermal necrolysis, and palmoplantar erythrodysesthesia [5]. Pothiwala et al. supported that the apparent little occurrence of cutaneous unfriendly medication responses (ADRs) of temozolomide may be halfway clarified by the parallel utilization of corticosteroids, which are more than once utilized as a part of patients with high-review gliomas to diminish the edema related with radiation or tumor development [6]. The incidence of Macula erythematous rash in general population is unknown. The data related to this incidence was unavailable.

For a foundation of a causal connection between a medication and suspected ADRs, Causality Assessment is a widely utilized framework. The Naranjo Algorithm is regularly used to assess the causality of ADRs and depends on a score ascertained from the responses to 10 questions. On a scale with a most extreme of "13" focuses, a score more prominent than "9" affirms that the unfavorable response to the medication is related with the presume drug. A score in the vicinity of "5 and 8" is viewed as "Probable", while a score of "1 to 4" is delegated "Possible" [3]. For our situation, the causality appraisal uncovered that the ADR was "plausible". Evaluation of the seriousness of ADRs can give valuable data and guide activities towards dealing with these. The Hartwig scale arranges ADRs as "mild", "moderate" or "severe" [4]. For our situation in presenting case, the presumed drug i.e., temozolomide was proceeded with; along these lines, fitting the 'mild' classification. Medicinal Oncologists ought to stay mindful of the way that antagonistic skin responses hold on in exorbitant screening. It is vital to know the possibly dangerous harmfulness of each chemotherapeutic operator, including temozolomide. Temozolomide ought to be endorsed with the acknowledgment of conceivable reactions announced here.

## Limitations of the Study

Since the present case report was a solitary instance of its write, all the more vast scale looks into are justified to investigate and clarify points of interest of the certainties of macula erythematous rash possibly caused by temozolomide.

## Declarations

**Ethical approval and consent to participate:** Patient consent was taken from the patient's party.

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