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CASE REPORT



## Mianserin induced periorbital edema: a case report

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### ABSTRACT

**Objectives:** The rare side effects as periorbital edema are worth to discuss most of the times. Periorbital edema is a rare and serious allergic condition. The etiology of this situation might be seen in different status that they are commonly independent of each other's as well as their various speculated formation mechanisms. The drug induced side effects might be seen in the etiologic factors basket of periorbital edema.

**Methods:** Observational case report.

**Results:** The authors describe a 30-year-old woman with generalized anxiety disorder who developed periorbital edema while undergoing of treatment with mianserin.

**Conclusions:** Interestingly, we observed a relationship with periorbital edema and a safe, effective, well-tolerated atypical antidepressant-mianserin. This is the first-demonstrated case in literature periorbital edema due to mianserin. The case is enormous importance for contributing the side effect set of periorbital edema. Thus, it will be useful contribution for the daily practice of physicians and the other professions.

### ARTICLE HISTORY

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### KEYWORDS

Adverse effect; anxiety;  
mianserin; periorbital edema

## Introduction

Mianserin, a tetracyclic and atypical antidepressant, has an antagonistic effect on 5-HT<sub>2A/C</sub>, 5-HT<sub>3</sub>, H<sub>1</sub>, α<sub>1</sub> and α<sub>2</sub>-adrenergic receptors. It is commonly used for the management of depression and anxiety disorders especially the patients or healthy groups which have the impaired sleep quality [1–3]. Mianserin is generally a safe and well-tolerated medication choice compared with the other antidepressant groups [4]. The adverse effect of mianserin that dizziness, blurred vision, constipation, sedation, somnolence, increased appetite, weight gain and bradycardia, is relatively demonstrated rare [5].



Periorbital edema is defined an acute vascular reaction on dermis and subcutaneous tissue in the periorbital area [6]. This localized edema which seen rarely, is caused by increased dilatation and permeability of the capillaries because of extravasation of serous fluid. Periorbital edema can be seen as a symptom of many disorders and situations such as congenital disorders, trauma, hypersensitivity reactions, infection, inflammatory disease, vascular disorders, thyroid disorders, orbital neoplasm and drugs [7,8].

In our case, we discussed a patient with periorbital edema associated with mianserin treatment and possible formation mechanism of this rare side effect.

## Case report

A 30-year-old woman, a high school graduated who is a married with 2 children. She had complained

of anxiety and fear because of swelling on her around the eyes 3 days after prescribed mianserin 30 mg/day. In her history, her chief complaints were anxiety palpitation, insomnia, uncontrollable worry about bad things will happen, restlessness and difficulty of concentration over the last few month. She had no any medical and psychiatric history and also her family before. She and her family history were also negative for alcohol and smoke. The Hamilton Anxiety Rating Scale (HAM-A) was scored as 32. According to the criteria of DSM-5, the patient was diagnosed by another psychiatrist with generalized anxiety disorder and prescribed mianserin 30 mg/day. A few days after pharmacological treatment, the patient reapplied to our clinic by complaining swelling and edema in the eyelid, started on the third day of mianserin treatment. In physical examination, there were no any redness, temperature increase, pain, ulceration and dermatitis with edema. Patient was consulted with internal medicine, dermatology, ophthalmology and otorhinolaryngology specialists. The patient's total blood count, liver (ALT, AST, GGT, ALP, bilirubin, albumin) and renal function tests (urea, creatinine), electrolytes (Na, K, Cl and Ca), complete urine examination, thyroid function tests and PA lung X-ray were normal. Patient was not in premenstrual period and pregnancy was not detected. According to applied Naranjo algorithm [scored as 5(Probable)] for evaluation of adverse effects, probable of adverse reaction due to periorbital edema induced mianserin

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were identified. Mianserin was stopped and trazodone 50 mg/day started. The patient's periorbital edema degraded in fourth day after her treatment is rearranged. She had no any complaint in control examination one month later.

## Discussion

As far as we know, this is the first case that demonstrated the periorbital edema related with mianserin in the literature.

Periorbital edema is rare and non-specific symptom and there is limited reference in the literature. The determination of etiopathogenesis periorbital edema and differential diagnosis are curious for clinician especially ophthalmologist and dermatologist [9]. Periorbital edema can be a component of the various etiological causes and the reason range is seems to be quite wide. In this view, all etiological factors should be under account to solve this disturbing symptom by the physicians [7,8]. The some medications associated with periorbital edema such as aspirin, naproxen, ibuprofen, nifedipine, diltiazem, midazolam, topiramate, irbesartan, lamotrigine, niacin, omeprazole, pantoprazole, diltiazem, nifedipine, phenytoin, phenobarbital, hydrochlorothiazide, imanitib and risperidone previously had been reported [10–13]. In some previous case report, peripheral edema associated with mirtazapine was declared [14,15]. However, there was no any other study or case report was observed in the literature in terms of periorbital edema as a side effect with an antidepressant.

The tolerability and effectiveness of mianserin was proved compared with the placebo and some other antidepressants. Mianserin can be safely prescribed to adult and elder patients. It has fewer drug interactions among the other antidepressants. The common complaints of patients might be sleepiness [2,16,17].

The exact mechanism of mianserin related with periorbital edema is unknown and remains unclear. The formation mechanism of edema was described with immune-mediated processes and autoimmune mechanism [18]. Mianserin has a wide action on the different receptors as described above. Generally, antihistaminergic effect of drugs are used for preventing the great deal of allergic reactions [19,20]. Despite the antihistaminergic receptor activation of mianserin, some kind of allergic reaction might be emerge [21]. This condition shows that different mechanisms can be effective on occurring the periorbital edema.

Mianserin induced periorbital edema is a rare, however, it is a potential side effect. Therefore, physicians should be taken into account of this side effect. Also our case is the vital for the consultant and liaison psychiatry for efficient collaboration and treatment this

kind of adverse effect and patients. Furthermore, the patients who have the allergic reaction history as our patients should be treated with the appropriate treatment alternatives. This observation should be supported with advanced clinical trials and further studies which can be explained the exact mechanism.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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