

LITHIUM CARBONATE SIDE EFFECTS IN DEPRESSIVE MANIA: A CASE REPORT

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ABSTRACT

Depressive mania is a mood swinging disorder, with clinical symptoms of depression followed by mania a schizophrenic like symptoms is medically handled by Experienced Psychiatrician on the basis of patient symptoms.

A case of dermatological blackish mark on periorbital region and facial roughness with diabetes insipidus like symptoms side effects, patient exasperated by the symptoms came to (out patient department) OPD for the treatment of aforementioned symptoms, after 2 years of medication by lithosun 300mg. We report a case of an middle aged 44 years male who progressively developed diabetic alike symptoms, apparently as a side effect from treatment with lithium carbonate. All symptoms completely resolved on discontinuation of lithium carbonate (Lithosun).

Middle age, more than yearly duration of lithium carbonate treatment, though minimal dose of lithosun treatment for its therapeutic value may be risk factors for its side effects. Implications for clinician is very important to note this side effect in BPAD (Bipolar affective disorder) to these groups of patients.

Keywords: Phthalates, parabens, degrees of growth inhibition, anti-microbial movement.

INTRODUCTION

Depressive mania is a mood swinging disorder, with clinical symptoms of depression followed by mania a schizophrenic like symptoms medically handled by Experienced Psychiatrician on the basis of patient symptoms, Lithosun is considered to be first line of mood stabilizer with absolute efficacy and reasonably less side effects but in some selective patient the side effect of lithium carbonate be conspicuous making annoying to survival[1].

Case presentation

A male of aged 44 years visited research clinic for his symptoms of polydipsia and polyuria (typical Diabetes insipidus symptoms), his history revealed that he is under depressive manic bipolar affective disorder since last 4 years, but further previous history reveals that before developing such bipolar disorder, he had already been treated for malaria fever with chloroquine & cured. After that slowly he started developing the symptoms of feeling loneliness, burning sensation around chest, restlessness, recent memory loss, appetite and weight alteration, lack of sleep; he went to psychiatrist and on the basis of his presented symptoms he was prescribed with anti maniac drugs. He has now rough facial skin, lower peri-orbital black mark. His blood pressure is 120/84mmHg and pulse rate is 72/minute, umbilicus waist circumference is 107 cm and weight is 78kg. He claims that his weight has been decreased to greater extent since last 4 years (it was 95kg before).

List of medicine he took for 2 years when he first diagnosed with BPAD mania.

- Amisulpride (Sulpitac)-200mg
- Haloperidol (Cizodol)-1.5mg
- Lorazepam (Loree)- 1 mg
- Glibenclamide (Norton) - 5mg

After remission of symptoms he is taking since last 2 years till now,

Lithium carbonate (Lithosun) -300 mg once daily.

Amisulpride (Supitac) -50mg once daily.

Lab. report of Glucose Tolerance Test

| | | |
|--------------|-----|--------------|
| Glucose (F) | 86 | 60-120 mg/dl |
| Glucose (PP) | 133 | 60-150 mg/dl |

Test and result; In the suspicion of Diabetes initially he performed GTT test that was supposed to diagnose diabetes alike symptoms but the test showed normal result, therefore in consideration of drug history medication, no further test is recommended instead on surmise of drugs side effect, he was told to discontinue lithosun (Lithium carbonate), then just one week of discontinuation of drug, all symptoms started fading away and later disappeared completely. Now the patient is free of all diabetic like symptoms.

Conclusion; This case is clear presentation of bipolar disorders i.e. manic depressive psychosis [MDP] treated with lithosun [lithium]. During his long term treatment he has developed certain side effects or mild toxicity such as DI, blackish skin on periorbital region, roughness of facial skin [dry skin] & loss of body weight & in addition to that he developed bipolar disorders just after his treatment of malaria with chloroquine. We the authors have tried our best to deal with most possible explanations for each of the side effects or toxicities already described here in detail in our discussion, only one thing we advice the treating psychiatrist to measure serum concentration of lithium every 3 months to minimise toxicities of lithium keeping in mind that lithium is a highly toxic drug due its low therapeutic window & they should advice the patient for adequate intake of sodium & water during therapy for successful treatment & better compliance.

DISCUSSION

In this case report the prescription Amisulpride was made to the patient for the acute manic symptoms and it can be used along with other medications, is a selective D(2)-D(3) antagonist that has been reported to be effective and reasonably safe in the treatment of bipolar mania due to its D(2) and D(3) antagonism may be involved as an antipsychotics in mania [1].

Lithosun(lithium carbonate) a antipsychotic medicine prescribed for mood swinging schizophrenic like disorder or mood stabilizer its mechanism of action is quite complex and is recommended as the initial agent and suggested to use L-tryptophan added concomitantly if needed as this lithium does tremor or seizure therefore to preclude convulsion lorazepam the clonazepam drugs is given for the initial first week of treatment [2,3].

Lithium has been established as most effective first line mood stabiliser in the treatment of Bipolar disorders i.e. Manic depressive psychosis [MDP]. It also remains the first choice for long-term prophylaxis of this disorders & it has proven anti-suicidal effect too.

Lithium has low margin of safety because of its narrow therapeutic window [0.5-1.5 mEq/l]. Hence, the therapeutic drug monitoring [TDM] is essential for optimal therapy [0.5-1mEq/l]. It is essential to measure serum levels of steady state concentration frequently, therapeutic plasma concentration should not exceed 1mEq/l at any cost. Lithium is closely related to its serum levels, very dangerous toxicity appears when plasma concentration exceeds 2mEq/l [4] hence, drug must be administered under supervision where facilities for estimating serum levels of lithium is available. It should be measured for thyroid function & renal function [plasma creatinine & electrolytes] before initiation of therapy & thereafter every 3-6 months during therapy for monitoring toxicity.

Lithium is a small monovalent cation like Na⁺ & K⁺. Kidney handles it in the same way as Na⁺, approximately 70-80% of the filtered lithium is reabsorbed in proximal convoluted tubules, sodium depletion reduces the rate of excretion of lithium & thus increases its toxicity, lithium decreases the reabsorption of sodium by renal tubules leading to its depletion, patients should maintain adequate salt & water intake during therapy [5,6].

On long-term use patients invariably develop "Nephrogenic diabetes insipidus" characterized by symptoms of polydipsia & polyuria, it is sometimes associated even with glycosuria & allergic reactions, lithium decreases cyclic AMP concentration induced by ADH in renal tubules, Lithium induced DI is resistant to ADH rather it responds well to amiloride, a potassium-sparing diuretic [7].

Lithium causes allergic reactions leading to skin rashes & dermatitis, this is reason in this patient presenting with blackish mark on periorbital region & facial roughness [dry skin].

This patient had already been taking oral hypoglycaemic drug Glibenclamide for a long time without frequent estimation of serum blood sugar concentration & in addition, lithium also causes glycosuria & patient also developed anorexia during treatment, hence these are the most possible reasons why this patient lost his body weight from 95 kg to 78 kg [8].

On prolonged use chloroquine causes mental disturbances, insomnia, & transient depression, even acute psychotic episodes & seizures may occur. This coupled with stress may be possible reason in this patient ultimately leading to development of bipolar disorders.

About 50% of patients of mania or bipolar disorders do not respond properly or poor response to lithium therapy, alternative drugs are used as adjuvants or alternative to lithium, they are valproic acid [9].

carbamazepine, lamotrigine, gabapentine, topiramate, olanzapine, risperidone & quetiapine. That is why in this patient, other drugs like amisulpride, haloperidol & lorazepam have been administered with lithium as adjuvants.

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