



## CASE REPORT

### A CASE OF WEIGHT GAIN AS A COMPLICATION INDUCED BY FLUNARIZINE PRESCRIBED PROPHYLACTICALLY IN MIGRAINE

Patil Ketan<sup>1\*</sup>, Patil B V<sup>2</sup>, S H Vardhamane<sup>3</sup>, Santosh K Jeevangi<sup>4</sup>, Anand Kanaki<sup>5</sup>, Nitin Konnur<sup>6</sup>

- 1 Post Graduate resident, Department of Pharmacology, M R Medical College, Kalaburgi, Karnataka, India
- 2 Professor, Department of Pharmacology, M R Medical College, Kalaburgi, Karnataka, India
- 3 Professor, Department of Pharmacology, M R Medical College, Kalaburgi, Karnataka, India
- 4 Professor, Department of Pharmacology, M R Medical College, Kalaburgi, Karnataka, India
- 5 Associate professor, Department of Pharmacology, M R Medical College, Kalaburgi, Karnataka, India
- 6 Assistant Professor, Department of Pharmacology, M R Medical College, Kalaburgi, Karnataka, India

Corresponding Author: Dr. Ketan Patil, PG Resident Dept of Pharmacology MR Medical college Kalaburgi, India

#### ABSTRACT:

Flunarizine is a non-selective Ca channel entry blocker used in prophylaxis of migraine, occlusive peripheral vascular disease, vertigo of central & peripheral origin and as adjuvant therapy in epilepsy <sup>[1]</sup>. It has some side effects like drowsiness, dry mouth, depression, weight gain and extrapyramidal symptoms. Weight gain is an important complication <sup>[2]</sup>. Hence we would like to publish here a case of weight gain induced by Flunarizine prescribed as prophylactic medication in migraine. There is sudden increase in weight gain of approximately 5kgs in span of 2 months after taking Flunarizine as prophylaxis in migraine.

**Keywords:** Flunarizine, Weight gain, prophylaxis, migraine

#### INTRODUCTION

Flunarizine is a non-selective Ca channel entry blocker with calmodulin binding properties and Histamine H1 blocking activity. It has been shown to decrease headache frequency & duration in both adult and children <sup>[3]</sup>. The side effects include drowsiness, dry mouth, depression, weight gain and extrapyramidal symptoms. Flunarizine is contraindicated in hypotension, heart failure and arrhythmia. Weight gain is an important side effect as it serves as risk factor for many other metabolic syndromes. We are presenting a case of complication of weight gain induced by flunarizine

**CASE REPORT:**

A 57yrs old patient presented with severe headache followed by vomiting every 15 days for past one year. She was diagnosed as migraine and prescribed Tab. Paracetamol 650mg 8<sup>th</sup> hrly for 3 days for acute attack and Tab Flunarizine 10 mg once a day for 3 months as prophylaxis. Signs & symptoms were relieved after starting treatment & paracetamol was stopped, patient was advised to continue flunarizine for 3 months

Before starting Flunarizine her weight was 50kgs, after using Flunarizine for 2wks her weight was increased by 2kgs. Further continuation of drug at the end of one month her weight increased by 2 kgs. After 2 months on Flunarizine her weight was 55kgs. Hence she gained 5kgs in span of 2 months on Flunarizine 10mg oral everyday

**DISCUSSION:**

In 1968 Janssen Pharmaceutica discovered Flunarizine with Ca entry blocking action & H1 antihistaminic activity. Flunarizine belongs to organic compound called Diphenylmethane, having Diphenylmethane moiety with methane wherein 2 hydrogen is replaced by 2 phenyl groups.

Flunarizine inhibits the influx of extracellular Ca through vascular membrane pores by physically plugging the channel. According vascular theory<sup>[4]</sup> of pathogenesis of migraine, an initial vasoconstriction leading to focal cerebral hypoxia serves as cause for future migraine attacks. Flunarizine is beneficial in prophylaxis of migraine as it prevents injury caused by Ca in hypoxic brain cells<sup>[5]</sup>.

The endogenous NO also plays an important role in generation & persistence of migraine headache. Flunarizine by reducing influx of Ca likely inhibits the synthesis & release of NO, thus antagonizing the NO mediated vasodilation.

Weight gain is an important side effect as it serves as risk factor for many other metabolic syndromes like DM, hypertension etc. The possible mechanism for this may be due to changes in the levels of hypothalamic orexinergic peptides<sup>[6]</sup>. We presenting one of complication of Flunarizine induced weight gain. After stopping the drug there is gradual decrease in weight.

Other drugs used commonly in migraine are NSAIDs, Aspirin, 5HT<sub>1D/1B</sub> agonist or triptans like sumatriptans, propranolol & TCA. Among all these drugs Flunarizine stands top for sudden weight gain.

**CONCLUSION:**

Weight gain induced by Flunarizine is one of the complications we must be alert off when prescribing Flunarizine prophylactically for migraine to suspect sudden increase in weight. The management is to withdraw the drug and using the alternative drugs. Propranolol can be prescribed safely in migraine

**REFERENCES:**

1. Todd PA<sup>1</sup>, Benfield P. Flunarizine. A reappraisal of its pharmacological properties and therapeutic use in neurological disorders. *Drugs*. 1989 Oct;38(4):481-99
2. Luo Net al. A randomized, one-year clinical trial comparing the efficacy of topiramate, flunarizine, and a combination of flunarizine and topiramate in migraine prophylaxis. *Pain Medicine* 2012 Jan; 13(1):80-6.



- 
3. Frenken CW et al. Flunarizine, a new preventive approach to migraine. A double-blind comparison with placebo. *Clinical Neurology and Neurosurgery* 1984;86(1):17-20
  4. K D Tripathi *Essentials of Medical Pharmacology* 7 th edition Jaypee Publication P: 176-180
  5. Schmidt R<sup>1</sup>, Oestreich W, Flunarizine in Migraine Prophylaxis: The Clinical Experience. *Journal of Cardiovascular Pharmacology* 1991; 18Suppl 8:S21-6.
  6. Caproni Set al. Migraine preventive drug-induced weight gain may be mediated by effects on hypothalamic peptides: the results of a pilot study. *Cephalalgia: An International Journal of Headache* 2011 Apr; 31(5):543-9.