



# **CAMLODIP**

Amlodipine Besilate 5 mg and 10 mg Tablets

### Introduction:

- High blood pressure is the single most important risk factor for stroke because it's the leading cause of stroke.
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- About 13 percent of strokes occur when a blood vessel ruptures in or near the brain. This is a hemorrhagic stroke.
- Amlodipine, initially approved by the FDA in 1987, is a popular antihypertensive drug belonging to the group of drugs called dihydropyridine calcium channel blockers.
- Due to their selectivity for the peripheral blood vessels, dihydropyridine calcium channel blockers are associated with a lower incidence of myocardial depression and cardiac conduction abnormalities than other calcium channel blockers.
- Amlodipine has antioxidant properties and an ability to enhance the production of nitric oxide (NO), an important vasodilator that decreases blood pressure<sup>2</sup>
- Calcium channel Blockers also play a role as neuroprotectants in stroke.<sup>3</sup>

### **Salient Features of Amlodipine:**

- Neuroprotective effect of (after ischemia or degenerative insults)-amlodipine as interest in application in the setting of dementias, particularly that of vascular dementia.<sup>3</sup>
- The anti-atherosclerotic properties of CCBs may be useful in preventing the atherothrombotic type of stroke at the large pre-cerebral artery level.<sup>3</sup>
- Amlodipine, has been tried in migraine prophylaxis with success with minimal side effects.<sup>4</sup>

#### References:

 $1. Me red ith PA, Elliott\, HL: Clinical \, pharmacokinetics \, of a mlodipine. \, Clin\, Pharmacokinet. \, 1992\, Jan; 22(1): 22-31.$ 

2. Fares H, DiNicolantonio JJ, O'Keefe JH, Lavie CJ: Amlodipine in hypertension: a first-line agent with efficacy for improving blood pressure and patient outcomes. Open Heart. 2016 Sep 28;3(2):e000473

3. In zitari, D. and Poggesi, A., 2005. Calcium channel blockers and stroke. Aging clinical and experimental research, 17 (4 Suppl), pp. 16-30.

 $4. Dandapani, B.K.\ and\ Hanson, M.R., 1998.\ Am lodipine for migraine prophylax is.\ Headache: The Journal of Head and Face Pain, 38(8), pp. 624-626.$ 



### **Clinical Study:**

1. "Assessing the applicability of 2017 ACC/AHA hypertension guidelines for secondary stroke prevention in the BOSS study"

Ref: J Clin Hypertens.;21:1534-1541,2019

- American College of Cardiology (ACC)/American Heart Association (AHA) hypertension clinical practice guidelines released in 2017 has changed the management of high blood pressure in stroke patients.
- Compared with previous guidelines, the 2017 released hypertension clinical practice guidelines recommend that adult patients who experience a stroke or TIA should maintain blood pressure no more than 130/80 mm Hg.
- This study, analysed the 1 year prognosis of different BP state in IS/TIA patients.
- The BOSS study enrolled 2,608 participants from 61 hospitals in China between 2012 and 2014.

#### **Conclusion:**

- Risk of recurrent stroke is increased in elevated BP group, and guideline recommended lowering BP has been associated with a reduction of recurrent stroke in 1 year period.
- Study found that stroke patients with BP controlled among 130 139/80 89 did not increase the incidence of clinical outcomes.

#### 2. "Amlodipine for Migraine Prophylaxsis"

 $Ref: Dandapani, et al.\ Am lodipine for migraine prophylaxis. Headache: The Journal of Head and Face Pain, 38 (8), 1998 (1998)$ 

2 cases, Age-35 year old female and 65 year old woman

Indication-Migraine

Dose-5 mg/day

Result:

#### Case1:

- There was complete resolution of the headaches.
- She has not required any prophylactic medications or abortive medications for 1 year in follow-up.
- Her menstrual periods have not changed, but she is free of headaches.
- There have been no side effects of amlodipine except mild pedal edema.

#### Case 2:

- After 6 weeks of administration, there was dramatic decrease in the headache frequency to 1 to 2 a month.
- She was maintained at the same dose with no adverse side effects except pedal edema.
- She has been headache-free for 8 months. Her blood pressure continues to be in the normal range. She has not required any analgesics.
- Her quality of life improved remarkably.

#### **Conclusion:**

·A new calcium antagonist of the dihydropyridine class, amlodipine, has been tried in migraine prophylaxis with success with minimal side effects.

·Case reports suggest that amlodipine is a useful new prophylactic drug for migraine.

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#### **Description:**

Camlodip contains long acting 1,4- dihydropyridine calcium channel blocker. It acts primarily on vascular smooth muscles by stabilizing voltage gated L-Type calcium channel in their inactive confirmation.

#### MOA:

L-type calcium channel blocker (CCB), amlodipine, had an inhibitory effect on the primary onset of stroke, with similar blood pressure (BP). Amlodipine is reported to reduce significantly the intracellular cholesterol level in smooth muscle cells of human atherosclerotic plaques and to prevent cholesterol from accumulating in normal cells from patients with coronary atherosclerosis.<sup>1</sup>

Amlodipine, inhibit ion influx through voltage-dependent calcium channels by binding to specific, channel-associated drug receptor sites and, thereby, reduce the frequency of channel opening in response to membrane depolarization and thus can be used in migraine prophylaxis with success with minimal side effects.<sup>2</sup>

#### Indication:

In stroke and Migraine Prophylaxsis.

#### Dose:

5 mg – 10 mg BID or as prescribed by healthcare professional.

#### Storage:

Store protected from light and moisture at a temperature not exceeding 30°C.

#### **Presentation:**

Available as a strip of 10 Tablets.



#### La Renon Healthcare Private Limited

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