

 HYPERTENSION, LIPIDS AND PREVENTION

**PEDAL EDEMA ASSOCIATED WITH CALCIUM ANTAGONISTS - INCIDENCE AND WITHDRAWAL RATE**

ACC Poster Contributions  
 Georgia World Congress Center, Hall B5  
 Sunday, March 14, 2010, 9:30 a.m.-10:30 a.m.

Session Title: Novel Effects of Common Cardiac Medication  
 Abstract Category: Pharmacology/Hormones/Lipids—Clinical  
 Presentation Number: 1021-111

Authors: *Harikrishna J. Makani, Maria Elena De Benedetti Zunino, Christopher Di Giorgio, Jorge Romero, Gangadhara Kabbli, Jorge Silva Enciso, Franz H. Messerli, St. Luke's Roosevelt Hospital and Columbia University College of Physicians and Surgeons, New York, NY*

**Introduction:** Pedal edema is considered to be a common and annoying adverse effect of calcium channel blockers (CCBs). It has been thought to result from paralysis of the precapillary sphincter causing intracapillary hypertension.

**Methods:** A MEDLINE and COCHRANE search was done from 1960 to September 2009 for randomized controlled trials (RCTs) showing the incidence of edema with CCBs in patients with hypertension. Studies with the sample size >100 were chosen for our analysis. Separate analysis was done for the patient withdrawal from CCBs due to pedal edema.

**Results:** 111 studies with the total patient population of 79,631 (mean age of 57± 7, 55% males) were included in the analysis. 6551 out of 37,106 patients (17.7%) had pedal edema on CCBs compared to 1986 of 34,654 patients (5.7%) on control/placebo, p<0.00001. Similarly, the patient withdrawal rate due to edema was higher in patients on CCBs (4.2%) compared to control/placebo (0.2%), p<0.00001. Both the incidence of edema and patient withdrawal rate due to edema increased with the duration of therapy with CCBs. Edema with high dose CCBs (defined as more than half the usual maximal dose) (19.5 per 100 person-years) was 2.9 times higher than with low dose CCBs (6.8 per 100 person-years).

**Conclusion:** The incidence of pedal edema progressively increases with duration of CCB therapy up to 6 months. Over the long term, more than 25% of patients with pedal edema discontinued CCBs because of this adverse effect.

