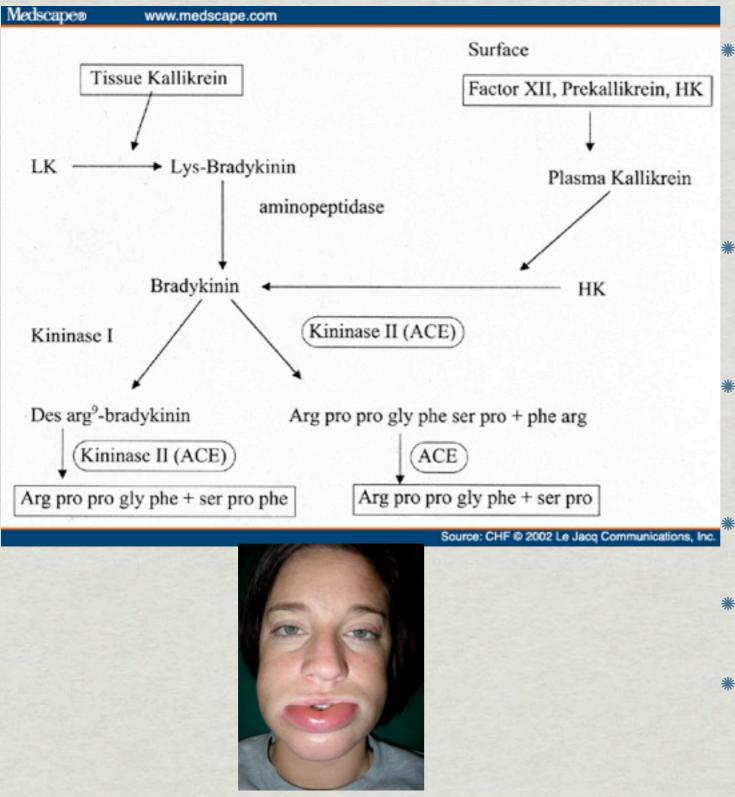
## **ACEIs and bradykinin**



http://diseaseslab.com/angioedema-causes-pictures-symptoms-treatment/

Bradykinin is a potent vascular endothelial peptide that produces vasodilation through NO and PG I2, contraction of smooth muscle in the bronchus and gut, increase vascular permeability, and is also involved in pain mechanism and natriuresis etc.

Bradykinin is formed from a substrate called kininogen by tissue and plasma activators .The activation is particularly important in blood pressure regulation and inflammation.

ACE breaks down bradykinin. Therefore ACEIs by blocking the breakdown of bradykinin increase its levels which contributes to increased vasodilator action of ACEIs.

Elevated levels of bradykinin produce a dry cough in 10% of patients.

- Hypotension can also be a problem especially in CHF patients
- Angioedema (pic on left) appears in 0.1-0.2% patients but incidence is 2-4 times higher in African Americans compared to Caucasians.