



## Aspirin to Prevent CAD: Not Beyond Trials

Arvind Meena, Deepak Kumar, Rajasri Bhattacharyya and Dibyajyoti Banerjee\*

Department of Experimental Medicine and Biotechnology, Postgraduate Institute of Medical Education and Research, Chandigarh, India

\*Corresponding Author: Dibyajyoti Banerjee, Department of Experimental Medicine and Biotechnology, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

Received: August 01, 2018; Published: August 21, 2018

The world is facing an epidemic of coronary artery disease (CAD) [1]. There is a considerable current interest in molecular research to unravel the mysteries behind it. However, the scenario is far from the control.

The CAD patients commonly use aspirin. It is believed that this drug in small dose will inhibit the increment of thrombus formation. Several clinical trials are also in favour of such a strategy, and currently, most textbooks approve the medicine for the purpose [2,3].

In practical settings of clinical practice, any evidence of CAD (like; ECG change, etc.) makes the clinician prescribe low dose aspirin if contradictions of aspirin therapy (like; bleeding disorders) are not present. This practice is prevalent throughout the nation if not throughout the world. In this context, we wish to highlight that person exhibiting PLA (Platelet Leukocyte Antigen) polymorphism suffers from aspirin resistance in comparison to other drugs approved for the purpose (like; Clopidogrel) [4-7]. PLA polymorphism is not uncommon [5]. Therefore, if a CAD patient with PLA polymorphism is prescribed aspirin, it may not work for protection. In such case, other drugs like clopidogrel should be the first choice. It may be advantageous if the PLA polymorphism study is done before prescribing aspirin. That is possible to be formulated as a guideline if a focused clinical trial is done and a positive response is received in support of the view mentioned above [8-13].

We feel that a detailed investigation of PLA polymorphism and aspirin response in CAD patients is required on an urgent basis. This will ensure the reduction of aspirin abuse, and proper use of clopidogrel.

### Bibliography

1. "Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015". *Lancet* 388.10053 (2016): 1459-1544.
2. Johnston A., *et al.* "The ADAPTABLE Trial and Aspirin Dosing in Secondary Prevention for Patients with Coronary Artery Disease". *Current Cardiology Reports* 18.8 (2016): 81.
3. Meves SH., *et al.* "Effectiveness of antiplatelet therapy in atherosclerotic disease: comparing the ASA low-response prevalence in CVD, CAD and PAD". *Journal of Thrombosis and Thrombolysis* 37.2 (2014): 190-201.
4. Liu L., *et al.* "High prevalence of aspirin resistance in elderly patients with cardiovascular disease and metabolic syndrome". *Journal of Geriatric Cardiology* 13.6 (2016): 531-536.
5. Abderrazek F., *et al.* "The GPIIIa P1A polymorphism and the platelet hyperactivity in Tunisian patients with stable coronary artery disease treated with aspirin". *Thrombosis Research* 125.6 (2010): e265-e268.
6. Papp E., *et al.* "Glycoprotein IIIA gene (PIA) polymorphism and aspirin resistance: is there any correlation?" *Annals of Pharmacotherapy* 39.6 (2005): 1013-1018.

7. Arya V, *et al.* "Association of CYP2C19, CYP3A5 and GPIIb/IIIa gene polymorphisms with Aspirin and Clopidogrel Resistance in a cohort of Indian patients with Coronary Artery Disease". *International Journal of Laboratory Hematology* 37.6 (2015): 809-818.
8. Karathanos A and Geisler T. "Monitoring aspirin and clopidogrel response: testing controversies and recommendations". *Molecular Diagnosis and Therapy* 17.3 (2013): 123-137.
9. Zhang H, *et al.* "High prevalence of aspirin resistance in elderly patients with cardiovascular disease (CVD) and hyperhomocysteinaemia". *Archives of Gerontology and Geriatrics* 59.2 (2014): 491-495.
10. Fan L, *et al.* "Frequency, risk factors, prognosis, and genetic polymorphism of the cyclooxygenase-1 gene for aspirin resistance in elderly Chinese patients with cardiovascular disease". *Gerontology* 59.2 (2013): 122-131.
11. Park J, *et al.* "Relationship between aspirin/clopidogrel resistance and intra-stent thrombi assessed by follow-up optical coherence tomography after drug-eluting stent implantation". *European Heart Journal - Cardiovascular Imaging* 14.12 (2013): 1181-1186.
12. Bhatt DL, *et al.* "Clopidogrel and aspirin versus aspirin alone for the prevention of atherothrombotic events". *New England Journal of Medicine* 354.16 (2006): 1706-1717.
13. Pattanaik D, *et al.* "Aspirin sensitivity and coronary artery disease: implications for the practicing cardiologist". *Future Cardiology* 8.4 (2012): 555-562.

**Volume 2 Issue 6 September 2018**

**© All rights are reserved by Dibyajyoti Banerjee, *et al.***