LETTER TO THE EDITOR

(J Banagladesh Coll Phys Surg 2013; 31: 176-177)

To
Editor-in-Chief
Journal of Bangladesh College of Physicians and Surgeons

Sir
It was a great pleasure and interest to read the time honored review article "Aspirin Resistance" by F Ahammad in your reputed journal (Vol 31, 2013). We would like to share a few observations.

a. It is a neatly constructed article, which is very much successful to boost our awareness regarding aspirin resistance/treatment failure that has substantial impact on public health.

b. Various combinations of key words like "aspirin", "acetylsalicylic acid", "platelet", "resistance", "failure", etc would have been better search terms than templates like "definition and mechanism of aspirin resistance". The total number of articles identified and on which basis the author chose the "potentially relevant" articles could have been elaborated more to strengthen the review.

c. While the author nicely describes the contexts of aspirin resistance (definition, mechanism, factors, etc), he lacks behind to highlight the clinical relevance. We think it is more important to determine whether aspirin resistance translates into increased risk of clinical events.It would be appreciated if a few examples of various trials were discussed, showing the association between measures of aspirin resistance and risk of serious vascular events[eg. Zheng ASY, Churilov L, Colley RE, et al. Association of aspirin resistance with increased stroke severity and infarct size. JAMA Neurol. 2013;70(2):208-213].

d. The factors responsible for resistance or failure are discussed under the headline "mechanism of action". They could be clarified separately. A few can be added[1]:

Acid suppression by proton pump inhibitors can increase the potential for mucosal esterases to hydrolyse aspirin to its inactive form salicylic acid, and thereby reduce enteral absorption of (active) acetylsalicylic acid.

Other sources of thromboxane A_2 production (eg. in monocytes, macrophages by COX 2 and Thromboxane synthase) can add to resistance. The associated increased production of F2-isoprostane is augmented by smoking, diabetes, hyperlipidaemia and unstable angina.

Ischemic vascular events are not always atherothrombo-embolic (eg. emboli from heart, occlusion by lipohyalinosis, vasculitis, etc.) and aspirin cannot prevent them.

Loss of antiplatelet effect of aspirin with prolonged administration (tachyphylaxis)

e. We are afraid that concluding remarks by the author might encourage readers for testing for aspirin resistance and initiate alternative therapies. We want to emphasize that, no published studies address the clinical effectiveness of altering therapy based on a laboratory finding of "aspirin resistance"[2]. Some authors did not find any benefit from other platelet inhibitors such as clopidogrel and tirofiban to aspirin resistant patients[3]. Till date, we are still missing crucial information on clinical relevance, diagnosis and treatment of aspirin resistance[4]. Patients, who have experienced a recurrent vascular event while on aspirin, require reassessment to find the underlying cause of the event, improvement of compliance, avoidance of interactive drugs, stopping smoking and then increment of dose or replacement with other antiplatelet drugs can be sought. Aspirin remains the single most cost-effective and widely used drug for secondary prevention of atherothromboticischaemic events[1].

References:

1. Hankey G, Eikelboom JW. Aspirin resistance. Lancet 2006; 367:606-17.
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3. Krasopoulos G, Brister SJ, Beattie WS, Buchanan MR. Aspirin "resistance" and risk of cardiovascular morbidity: systematic review and meta-analysis. BMJ 2008 Jan 26;336(7637):195-8
4. Freedman JE. The aspirin resistance controversy. Circulation 2006; 113:2865-2867.

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Author Reply

To
Editor-in-Chief
Journal of Bangladesh College of Physicians and Surgeons.

Sir,

I thank our two honorable teachers Prof. Dr. Md. BillalAlam and Dr. Syed GhulamMogni Mowla for their interest to my article. They have rightly mentioned some points in my article and I like to clarify them.

Regarding the search of reference articles your thoughts are right but using my methods I found my necessary informations and did not need to use further words. Regarding to avoid to mention clinical trials in my article, I like to say that it is due to limit the size of the article. About to the next point my observations are that "factors responsible for aspirin resistance or failure" and "mechanism/s of aspirin resistance" have been used interchangeably in different reference articles. About to the last point regarding conclusion I had liked to say that my openion to test the suspected aspirin failure/ resistance cases after excluding all possible factors in our research context, as more research is being focused on this issue globally. It did not indicate to use the aspirin resistance tests randomly in private practices as more work is needed to standardize and validate these tests.

I again thank . Dr. Md. BillalAlam and Dr. Syed GhulamMogni Mowla for their positive interest to the subject.

Sincerely yours.

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