Metabolites of arachidonic acid in activating platelets and their estimation by radiolucide techniques

To the Editor: In their paper “Metabolites of arachidonic acid in activating (better: ‘activated’) platelets and their estimation by radiolucide techniques” in the Hellenic Journal of Nuclear Medicine 2006; 9(1): 49, T. Daskalou and co-authors are reviewing the arachidonic acid pathway and its metabolites and in particular oxidation injury [1].

In contrast to the abstract, the isoprostane 8-epi-PGF2α, the most relevant and reliable measure of in-vivo oxidation injury, is not even touched. This is a pity as 8-epi-PGF2α is a relatively robust parameter which probably as the only one so far found its place in today’s clinical routine in a variety of conditions.

In contrast, determination of classical metabolites of arachidonic acid, such as PGL2, thromboxane (TX) A2, and even PGE2 failed to contribute significantly to clinical routine, mainly due to methodological difficulties in sampling and processing. The authors are reporting physiologically too high. PGI2.

Daskalou T, Karamouzis M, Liaros G. Metabolites of arachidonic acid in activating platelets and their estimation by radiolucide techniques. Hellenic J Nucl Med 2006; 9: 49-52. I would like to mention the following: a) It is true that isoprostane 8-iso-Prostaglandin F2α, 8-iso-PGF2α and 8-epi-PGF2α (old name according to Former) or more correctly 15F2-isoprostane 15-F2-isop (new name according to Taber) is the most reliable biochemical-endoctrino logical index of lipid peroxidation in many abnormal conditions [1]. Normal values to isoP were not mentioned in our paper because the test was performed by enzymoimmunoassay and not by radioimmunoassay which would be more familiar to nuclear medicine physicians. Normal values are 46.9±5.7 pg/ml, analogous to normal values of others [2.3] and almost identical to what we found in a recent paper of ours [4]. b) Normal values of thromboxane A2 as mentioned in our article, refer to the stable metabolite TXB2, as is correctly mentioned by Prof. H. Sinzinger. The plasma levels of the stable metabolite TXA2, that is the TXB2, as mentioned in our article, are analogous with those mentioned by others [5.6] and in a recent article of ours [7]. Additionally, we note that we have preferred to measure plasma TXB2 and not urine 11-dehydro-TXB2 because we were measuring in parallel this biomolecule in patients on chronic hemodialysis where urine collection is a problem per se. We take every technical precaution for the accuracy of our results (indomethacine inhibitor etc). Also, small differences in normal plasma levels of TXB2 may be due to dietetic and environmental factors [8,9]. c) Normal values of prostacycline Ip, as mentioned in our article refer to its stable metabolite, the 6-keto-PGF1α, as is correctly mentioned by Prof. H. Sinzinger. Normal values of this stable metabolite mentioned in our article are similar to those of others [10]. Small differences are due to dietetic and environmental factors [11]. d) Normal values of PGEl as mentioned in our article the value being 6.1±1.2 pg/ml are analogous to normal values of others [12]. Please notice that these plasma values are expressed in pg/ml and not in mg/ml as mentioned by Prof. H. Sinzinger.

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Bibliography

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Bibliography

Authors’ reply:
In reply to the comments of Prof. H. Sinzinger referring to our paper under the title “Metabolites of arachidonic acid in activating platelets and their estimation by radiolucide techniques”, in Hellenic J Nucl Med 2006; 9: 49-52, I would like to mention the following: a) It is true that isoprostane 8-iso-Prostaglandin F2α, 8-iso-PGF2α and 8-epi-PGF2α (old name according to Former) or more correctly 15F2-isoprostane 15-F2-isop (new name according to Taber) is the most reliable biochemical-endoctrino logical index of lipid peroxidation in many abnormal conditions [1]. Normal values to isoP were not mentioned in our paper because the test was performed by enzymoimmunoassay and not by radioimmunoassay which would be more familiar to nuclear medicine physicians. Normal values are 46.9±5.7 pg/ml, analogous to normal values of others [2.3] and almost identical to what we found in a recent paper of ours [4]. b) Normal values of thromboxane A2 as mentioned in our article, refer to the stable metabolite TXB2, as is correctly mentioned by Prof. H. Sinzinger. The plasma levels of the stable metabolite TXA2, that is the TXB2, as mentioned in our article, are analogous with those mentioned by others [5.6] and in a recent article of ours [7]. Additionally, we note that we have preferred to measure plasma TXB2 and not urine 11-dehydro-TXB2 because we were measuring in parallel this biomolecule in patients on chronic hemodialysis where urine collection is a problem per se. We take every technical precaution for the accuracy of our results (indomethacine inhibitor etc). Also, small differences in normal plasma levels of TXB2 may be due to dietetic and environmental factors [8,9]. c) Normal values of prostacycline Ip, as mentioned in our article refer to its stable metabolite, the 6-keto-PGF1α, as is correctly mentioned by Prof. H. Sinzinger. Normal values of this stable metabolite mentioned in our article are similar to those of others [10]. Small differences are due to dietetic and environmental factors [11]. d) Normal values of PGEl, as mentioned in our article the value being 6.1±1.2 pg/ml are analogous to normal values of others [12]. Please notice that these plasma values are expressed in pg/ml and not in mg/ml as mentioned by Prof. H. Sinzinger.
Our experience from radioiodine-131 treatment and whole body scintigraphy findings in 357 patients with metastatic differentiated thyroid carcinoma after surgical ablation

Table 1. Number of 131I treatments and whole body scan findings in our patients

<table>
<thead>
<tr>
<th>No of 131I treatments with 7.4 GBq</th>
<th>No of patients</th>
<th>Post 131I treatment WBS localization of metastasis</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>No negative</td>
<td>No positive</td>
</tr>
<tr>
<td>1st</td>
<td>68</td>
<td>67</td>
</tr>
<tr>
<td>2nd</td>
<td>23</td>
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<td>3rd</td>
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<td>5th</td>
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<tr>
<td>6th</td>
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<td>–</td>
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<tr>
<td>7th</td>
<td>1</td>
<td>–</td>
</tr>
<tr>
<td>9th</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>12th</td>
<td>1</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td>113</td>
<td>96 (85%)</td>
</tr>
</tbody>
</table>


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