Letter to the Editor

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About Methemoglobinemia

Methemoglobinemia Hakkında

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To the Editor,

I enjoyed reading Mutlu et. al's paper entitled "Acquired methemoglobinemia in infants" in the recent issue of the Journal (2011;28:131-134).

I would like to add to this well written article that we have also reported acquired methemoglobinemia cases with administration of cytanest in puerperal women with G6PD deficiency and infants in whom erythrocyte cytochrome 65 reductase was assoyed [1-4], which is the main enzyme for methemoglobin reductase in erythrocytes as mentioned by the authors. In addition, hereditary methemoglobinemias due to NADH dependent cytochrome reductase (NADH dependent methemoglobine reductase = NADH dependent diaphorase) deficiency, which was assayed only by us so far in Turkey with probable dominant inheritance and Hemoglobin M cases were reported on several journals [5-11].

On this occassion I also would like to emphasize that methylenblue (1-2 mg/kg in 1% solution; in higher concentration and doses causes and or increases methemoglobinemia) should be preferred in acquired as well as hereditary enzymopenic methemoglobinemias, since it is effective within minutes with corrected oxygen dissociation curve. It was also used orally (2-5 mg/kg/day) in our enzymopenic methemoglobinemia patients successfully. To my suprise, it was found effective within 12 to 16 hours in the authors 2 patients.

I also would like to point out that congenital cyanosis was recently reported in a baby with mutant fetal hemoglobin (gama chain mutation) with dominant inheritance due to decreased oxygen affinity without methemoglobinemia [12].

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Conflict of Interest Statement

The authors of this paper have no conflicts of interest, including specific financial interests, relationships, and/or affiliations relevant to the subject matter or materials included.

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Reply

We are thankful to Dr. Özsoylu for his valuable comments. In our cases, two neonates (methemoglobin levels 30.4% and 26.8%) were treated with methylene blue intravenously, cyanosis resolved in a few hours with application of methylen blue but methemoglobin levels decreased to less than 5% at 12 and 16 hours later. In medical literature, similar results have been reported. Bender and Neuhaus [1] reported a case (methemoglobin level 24%) treated with ascorbic acid and methylene blue, methemoglobin concentration normalized twenty-four hours later. Bouziri et al. [2] reported an infant (methemoglobin level 50.6%) was treated with methylene blue intravenously and methemoglobin levels decreased to 9.8% twenty-four hours later. Ergül et al. [3] reported two infants (methemoglobin levels 49.6% and 37.7%) were treated with methylene blue intravenously and methemoglobin levels decreased to 2.5% at 12 hours later and in other case, methemoglobin levels decreased to 8% at 4 hours later.

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