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Low dose aspirin in pregnancy: a clinical and biochemical study of effects on the newborn

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1 Introduction

Pregnancy induced hypertension (PIH) is one of the most important diseases in pregnancy. An imbalance between prostacyclin (vasodilator and antiaggregating agent) and thromboxane (vasoconstrictive and aggregating factor) is considered one of the major pathogenetic mechanisms of this disease.

Low dose Aspirin (LDA) (50–100 mg/day) has been used in clinical trials for the prevention of PIH and IUGR with encouraging results [1, 7, 10, 11]. The clinical benefit of LDA is thought to derive from inhibition of platelet thromboxane production [2].

As Aspirin crosses the placenta, one of the major problems of its use is the effect on the fetus and the newborn. In fact, several Authors have reported neonatal intracranial hemorrhage and other coagulation abnormalities with the use of Aspirin, during the last weeks of pregnancy, in doses ranging from 300 mg to 5 g/day [3, 6, 9].

However until now only few data on the effects of fetal exposure to Aspirin in low doses have been available [2, 8]. The aim of this case-control study is a clinical evaluation of the newborns exposed in utero to low dose Aspirin and a biochemical study of the inhibition of neonatal platelet thromboxane.

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Curriculum vitae

Dr ADRIANA VALCAMONICO *was born in Brescia (Italy) in 1962. She attained her degree in medicine at the University of Brescia in 1987. After clinical training at the University Hospital in Brescia, she specialized in Obstetrics and Gynecology in 1991. Since 1988 she has been a member of the Study Group of Hypertension in Pregnancy of the University of Brescia. She is a researcher in the field of perinatal medicine, with particular interest in hypertensive disease in pregnancy and fetal ultrasound.*

2 Material and methods

Our study group was composed of ten newborns of mothers at high risk for PIH or IUGR treated with 50 mg/day of Aspirin from 12th week until delivery.

Eight neonates born in the same period were selected on a random base as controls.

Each baby underwent a clinical evaluation by pediatricians who were blind to the study, fol-