Low-dose aspirin in the prevention of preeclampsia in twin pregnancy

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Objective. To identify risk factors for hypertensive disorders of pregnancy (HDP) in multiple gestations and to evaluate the effectiveness of low dose aspirin administration in preventing HDP in a large cohort of multiple pregnancies.

Materials and Methods. This retrospective study included twin pregnancies followed up by the Twin Pregnancy Care Unit of Sant'Anna Obstetric-Gynecological Hospital in Turin between 2015 and 2023. Low dose aspirin (100 mg/die) was administered to a subgroup of women from 16 to 32 weeks of GA. We compared maternal characteristics of twin pregnancies complicated by HDP and uncomplicated ones. We compared incidence of HDP and perinatal outcomes of women who were administered low dose aspirin and of those who were not.

Results. Among the 668 pregnancies included in our dataset, 91 (13.6%) developed HDP. Women who developed HPD were significantly older (36.8 years *vs* 33.1 years, $p < 0.001$), more often nulliparous ($p = 0.010$, OR 2.3) and more frequently used artificial conception ($p < 0.001$, OR 2.9). Maternal BMI, ethnicity and chorionicity were not significantly associated with HDP. Women who were administered ASA ($n = 248$) had a lower incidence of overall HDP ($p < 0.001$, OR 0.38), gestational hypertension ($p = 0.007$, OR 0.42) and preeclampsia ($p < 0.001$, OR 0.36). No difference was found in the incidence of sIUGR and in neonatal outcomes between the two groups.

Conclusions. Multiple pregnancy is a risk factor for HDP per se; nulliparity, artificial conception and maternal age are independent additional risk factors for HDP. Prevention with low dose aspirin is effective in reducing incidence of HDP in multiple pregnancy.