

THE LANCET, June 23, 1979

EFFECT OF ASPIRIN ON INCIDENCE OF PRE-ECLAMPSIA

SIR,-Goodlin et al.¹ have described a patient with recurrent pre-eclampsia and thrombocytopenia who seemed to benefit from aspirin. The efficacy of aspirin on the progress of pregnancy-associated hypertension has received little attention.

Over a period of seven months all 964 primigravida: in their third trimester admitted for antenatal care or for delivery, had a questionnaire administered by one of six carefully instructed midwives, about their intake of aspirin-containing compounds and other non-steroidal anti-inflammatory drugs during pregnancy. Two groups were identified-98 patients who had no history of drug intake during pregnancy and 48 patients who had taken aspirin or aspirin-containing compounds more than once a fortnight throughout pregnancy. The remaining 818 patients had taken other drugs or aspirin infrequently. Preeclampsia was diagnosed if the patient had a sustained increase in diastolic blood-pressure of more than 20 mm HG after 24 weeks' gestation, having been normotensive when seen in the first trimester.

Of the 146 patients studied, 18 (12.3%) had pre-eclampsia - 16 (16%) of those who took no aspirin but only 2 (4%) of those who took aspirin frequently throughout pregnancy (Fisher's exact test, $p=0.0275$).⁴

Evidence is accumulating which suggests that platelet activation is involved in pre-eclampsia.^{2,3} McKay et al.,⁴ from animal experiments, suggested that platelet adhesion to endothelium was the first pathological event in pre-eclampsia, and Redman et al.⁵ showed that the platelet-count in women with chronic hypertension fell before the onset of superimposed preeclampsia. Both of these studies accord with the concept that platelet changes occur early in the disease process. Platelet activation may activate the coagulation system,⁶ and platelet activation, possibly by immune complexes,⁷ could play an important role in initiating the disease process and coagulation changes described in pre-eclampsia. Aspirin inhibits platelet activation, including that induced by antigen-antibody complexes.⁶ The ingestion of aspirin throughout pregnancy might therefore have been responsible for decrease in pre-eclampsia we found. Platelet participation may be the link between two of the main theories on the pathogenesis of pre-eclampsia - namely, the immunological and the haemostatic.

AJ CRANDON and D M ISHERWOOD

Department of of Obstetrics and Gynaecology and Chemical Pathology, University of Leeds

(1) Goodlin RC, Haesslein HO, Fleming J. *Lancet* 1978;ii:51. (2) Redman CWG, Allington MJ, Bolton FG, Stirrat GM. *Lancet* 1977;ii:248. (3) Whigham KE, Howie PW, Prentice CRM. *Br J Obstet Gynaecol* 1978;85:28. (4) McKay DG, Goldenberg V, Kunnitz H, Csavossy I. *Archs Path* 1967;84:557. (5) Redman CWG, Bonnar J, Beilin L. *BMJ* 1978;i:467. (6) Packham MA, Mustard JF. *Sem. Haemat* 1971;8:30. (7) Pfueller S, Luscher EF. *Immunochemistry* 1972;9:1151.