

Circulating immune complex (CIC) levels were measured by a polyethylene glycol turbidity assay in patients with molar pregnancy to investigate the relationship between CIC and trophoblastic tumor burden. At the time of presentation, CIC values were in normal range in 27 (87%) of 31 patients with molar pregnancy. Three of the four patients who presented with elevated CIC levels had concurrent medical illness (toxemia, hepatitis, and renovascular hypertension). Eighteen patients were followed with serial CIC measurements until they achieved gonadotropin remission and all 18 patients developed increased levels as they entered remission ($P < 0.001$). As patients approach gonadotropin remission, a decreasing antigen load may provide a more favorable antigen-antibody ratio for the formation and detection of CIC. CIC values remained elevated during remission from 6 to 16 weeks (mean = 11.5 weeks) and then declined to presentation levels. In one patient, serum obtained at the time of peak CIC levels was concentrated, fractionated and characterized to identify the antigen components in the immune complexes. Importantly, this patient had only conceived two prior molar pregnancies and had received no blood product transfusions. One of the paternal HLA haplotypes (AW32) was demonstrated to be an antigen component in the maternal immune complexes. Further investigation should be undertaken to evaluate possible interactions between CIC and host immune defenses.