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**Autoagglutination abilities of *Plasmodium falciparum* parasite isolates from severe complicated and uncomplicated *P. falciparum* infections**

A novel phenotype of Plasmodium falciparum parasite has been described to be associated with autoagglutination, which is the agglutination of *P. falcparum* infected erythrocytes in the absence of agglutinating antibodies. In this study autoagglutinating ability of parasite isolates from 18 uncomplicated (UC) and 12 severe complicated (SC) patients in Sri Lanka has been investigated. The indices of autoagglutination (total number of parasitized erythrocytes agglutinated equalized to 1% parasitaemia) of parasite isolates from SC patients showed significantly higher autoagglutination ability compared to that of parasite isolates from UC patients ($p=0.03$). These results suggest that the process of formation of autoagglutinates may be involved in generating severe pathogenesis of *P. falcparum* malarial disease. Further the sizes of autoagglutinates of parasite isolates from both UC and SC patients were found to be smaller, comprising of 3-7 parasitised erythrocytes per autoagglutinate compared to the presence of respective autologous acute serum. The size variation found in autoagglutination and agglutination may indicate different spatial distributions of antigens involved in these two processes. The analysis of the indices of autoagglutination, resetting and agglutination of parasite isolates from both UC and SC patients revealed that there are no correlations between the tested indices. This may indicate a probable involvement of a unique antigen in the autoagglutiantion process.