

中文題目：幽門螺旋桿菌感染造成血小板低下機轉探討

英文題目：P-selectin-dependent platelet aggregation and apoptosis may explain the decrease in platelet count during *Helicobacter pylori* infection

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Background: P-selectin expression has been shown in *Helicobacter pylori*-infected persons, an infection that has been clinically associated with platelet-related diseases, such as idiopathic thrombocytopenic purpura. However, the role of P-selectin expression during *H pylori* infection remains unclear.

Methods: In this study, we hypothesized that P-selectin expression was associated with platelet aggregation during *H pylori* infection. Using flow cytometry, we examined the levels of adhesion between *H pylori* and platelets as well as the levels of P-selectin expression and platelet phosphatidylserine (PS) expression during *H pylori* infection. Significantly high levels of adhesion between proaggregatory bacteria and platelets were observed. We identified that *H pylori* IgG is required for bacteria to induce Pselectin expression and that a significant release of P-selectin is essential for *H pylori* to induce aggregation. In addition, cellular apoptotic signs, such as membrane blebbing, were observed in platelet aggregates. PS expression was also detected in platelets during infection with both pro-aggregatory and nonaggregatory strains of *H pylori*.

Results: We suggested that the decrease in platelet counts seen during *H pylori* infection is the result of P-selection-dependent platelet aggregation and PS expression induced by the bacteria.

Conclusion: This study provides an insight into the association between increased platelet P-selectin expression and *H pylori*-induced platelet aggregation, as well as how a decrease in platelet count can be triggered both by platelet aggregation and platelet surface exposure of PS during *H pylori* infection.