

# ABO blood group and immune thrombocytopenia

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## ABSTRACT

**Introduction:** The ABO blood group system plays a significant role in various human infectious and non-infectious diseases. However, the association between ABO and thrombocytopenia is complex and may vary depending on the type of thrombocytopenia under investigation. While previous studies have explored epidemiology, they have primarily focused on the susceptibility of ITP and have not adequately addressed the role of ABO. Therefore, we conducted an investigation the association between ABO and ITP. **Materials and Methods:** A case-control study was conducted at our center with 102 patients diagnosed with ITP and 114 donors. Basic demographic information and blood frequencies were recorded. We evaluated the association between ABO, gender and haematological parameters including white blood cell count (WBC), haemoglobin count (HB), and platelet count (PLT). **Results:** ITP group consisted of 28 (27.5%) male and 74 (72.5%) females, with a mean age of  $33.31 \pm 16.62$  years. ABO phenotypes, A, B, AB, and O in the ITP and control groups were 32.4%, 25.5%, 7.8%, 34.3% and 21.9%, 27.2%, 10.5%, 40.4%, respectively. Blood type A was not significantly associated with a higher risk of ITP ( $p=0.084$ ). There was no significance difference in the distribution of ABO blood group by gender (male:  $p=0.395$  and female:  $0.684$ ), WBC ( $p=0.331$ ), HB ( $p=0.980$ ), and PLT ( $p=0.592$ ). **Conclusions:** Our study provides valuable insights into existing knowledge and shows that individuals of any blood type are susceptible to developing ITP. Thus, suggesting that ABO cannot be established as a significant biomarker for ITP susceptibility. Despite that, we emphasise the need for further research by encompassing diverse ethnic groups and populations to validate our findings.