



REVISIÓN BIBLIOGRAFICA EN PTI NOVIEMBRE – DICIEMBRE 2024

1. **Pascual-Izquierdo C, Llacer-Ferrandis MJ, de-la-Iglesia A, Monsalvo-Saornil S, Menor-Gómez M, Gil-Fernández JJ, Chica-Gullon E, Álvarez-Román MT, Perez-Segura G, Zafra D, Ortuzar-Pasalodos A, González-Gascón-Y-Marín IT, Moreno G, Arquero-Portero T, Moreno-Carbonell M, Revilla N. Avatrombopag in adults with immune thrombocytopenia: A multicentre real-life observational study in Madrid, Spain (AVAMAD study). Br J Haematol. 2025 Jan 5. doi: 10.1111/bjh.19975. Epub ahead of print. PMID: 39756394.**

Immune thrombocytopenia (ITP) is a rare acquired disorder where thrombopoietin-receptor agonists have become mainstays of ITP treatment. With the recent approval of avatrombopag (AVA), real-world studies are essential to evaluate its efficacy and safety. Our study of 66 adult ITP patients treated with AVA showed a high response rate. After starting AVA, 74.2% did not require rescue medications, with minimal adverse effects. Additionally, 56.0% of patients reduced other ITP medications, and all patients aged ≥ 65 years responded to AVA. Results should be confirmed in larger studies, but AVA appears to be an effective and safe treatment for ITP patients.

2. **Liang H, Duan L, Long M, Tie S, Sun C, Ma S, Wang J, Wang S. Analysis of Risk Factors and the Establishment of a Predictive Model for Thrombosis in Patients with Immune Thrombocytopenia. Clin Appl Thromb Hemost. 2025 Jan-Dec;31:10760296241301398. doi: 10.1177/10760296241301398. PMID: 39763222; PMCID: PMC11705361.**

Objectives: To explore the risk factors for thrombi occurring in patients with immune thrombocytopenia (ITP) and establish a risk prediction model to better predict the risk of thrombosis in patients with ITP.

Methods: We retrospectively analyzed 350 ITP patients who had been hospitalized in the First People's Hospital of Yunnan Province between January 2024 and June 2024. For all patients, we recorded demographic characteristics and clinical data, analyzed the risk factors for thrombosis



in ITP patients and then developed a risk prediction model.

Results: Stepwise logistic regression analysis indicated that a high D-dimer level, a low PC (platelet count) and a high Padua score were independent risk factors for thrombosis in ITP patients. According to multivariate analysis, a predictive model for thrombus risk showed that the area; the area under the ROC curve (AUC) was 0.673 (95% CI: 0.615-0.730) and the maximum Youden index, sensitivity and specificity were 0.272, 47.0% and 80.2%, respectively. **Conclusion:** A high D-dimer level, low PC, and high Padua score were shown to be independent risk factors for thrombosis in ITP patients. Also, the study showed that these three risk factors might be used as a risk predictors for thrombosis in ITP patients to some extent.

- 3. Wang N, Wang Z, Liu J, Hu Y, Dong S, Chen H, Meng J, Ma J, Chen Z, Cheng X, Wu R. Long-term efficacy and safety of avatrombopag in Chinese children with primary immune thrombocytopenia: A real-world observational study. Br J Haematol. 2025 Jan 5. doi: 10.1111/bjh.19973. Epub ahead of print. PMID: 39756414.**

Avatrombopag is a newly approved thrombopoietin receptor agonist for second-line treatment of chronic immune thrombocytopenia (ITP) in adults. Our previous study showed its efficacy and safety in a small sample of paediatric ITP patients. However, large samples and long-term data are still lacking. Children diagnosed with ITP and treated with avatrombopag for at least 4 weeks were enrolled. In 94 ITP patients with a median age of 7.43 (interquartile range (IQR), 4.82, 10.80) years, the median effective dose was 10 (IQR, 10, 20) mg for children under 6 years old and 20 (IQR, 20, 40) mg for children under 18 years old. The overall response was achieved in 72.3% (68/94) and 73.4% (58/79) of patients within 4 weeks and 12 weeks. The sustained response at 24 weeks and 48 weeks were 62.3% (33/53) and 51.6% (16/31) respectively. The occurrence of bleeding events, rescue therapy and concomitant ITP medication decreased during the follow-up period. For safety, thrombocytosis (platelet count $\geq 400 \times 10^9/L$) was the most frequent adverse event (AE) observed in 44 children 97 times. Long-term treatment with avatrombopag in ITP children showed a rapid and sustained platelet response and good bleeding control without significant or new AEs.



- 4. Modi D, Chowdhury SR, Mahamad S, Modi H, Cines D, Neunert C, Al-Samkari H, Cooper N, Moulis G, Cunningham-Rundles C, Liebman H, Bussel JB, Breakey VR, Nazy I, Arnold DM. Primary Versus Secondary Immune Thrombocytopenia (ITP): A Meeting Report from the 2023 McMaster ITP Summit. *Thromb Haemost.* 2024 Dec 24. doi: 10.1055/a-2508-1112. Epub ahead of print. PMID: 39719150.**

The McMaster Immune Thrombocytopenia (ITP) Summit was an educational seminar from leading experts in immune thrombocytopenia and related disorders geared towards hematologists, internists, immunologists, and clinical and translational scientists. The focus of the Summit was to review the mechanisms, diagnosis and treatment of primary versus secondary ITP. Specific objectives were to describe the unique features of secondary ITP, and to review its mechanisms in the context of autoimmune disease and infection. The key messages in this Summit were: (1) ITP is a heterogeneous disease, and genetic and immunologic insights may help classify patient subtypes; (2) Exploring the autoimmune mechanisms and their association with hypogammaglobulinemia in patients with secondary ITP could improve our understanding of ITP and its subtypes; (3) Investigating the mechanisms of ITP in the context of infections caused by viruses such as CMV, HIV, dengue, and hepatitis C, or bacteria such as *H. pylori*, or vaccinations could provide insight into the causes of ITP. A better understanding of secondary ITP could help elucidate the pathogenesis of ITP.

- 5. Hou XR, Yan ZY, Liu S, Gao N, Chen J, Wang YW, Wang L, Li Z, Wang XR, Dong QF, Wang QY, Sun L, Wang YM, Ma J, Zhao YJ, Xu ZL, Cao CC, Peng J, Hou M, Liu XG. Corticosteroids plus metformin versus corticosteroids as front-line treatment for patients with newly diagnosed ITP and pre-existing type 2 diabetes mellitus: A multicentre propensity score-matched study. *Br J Haematol.* 2024 Dec 18. doi: 10.1111/bjh.19940. Epub ahead of print. PMID: 39696781.**

Corticosteroids are the standard first-line treatment for primary immune thrombocytopenia (ITP), with a high initial response but unsatisfactory sustained response (SR). Additionally, corticosteroids usually lead to hyperglycaemia especially in patients with pre-existing type 2 diabetes mellitus (T2DM). Besides reducing the blood glucose levels, metformin was found to have immunomodulatory effects. We hereby conducted a



multicentre propensity score matching analysis of corticosteroids plus metformin versus corticosteroids for newly diagnosed ITP patients with pre-existing T2DM. After matching at a ratio of 1:1, there were 57 patients in each group. Baseline characteristics, comorbidities and other medications including concurrent hypoglycaemic medications were balanced between the two groups. No statistical difference was observed in the initial response rate at day 14. It was notable that patients in the metformin group had a significantly higher SR rate and longer duration of response compared to the non-metformin group. Metformin inclusion was associated with a higher incidence of stomach upset, which were generally tolerable. Our study provided evidence that the addition of metformin to corticosteroids might be a promising front-line treatment for newly diagnosed ITP patients with pre-existing T2DM.

- 6. Freddi G, Parimbelli E, Vai F, Quaglini S, Bozzi V, Barozzi S, Beneventi F, De Maggio I, Cavagnoli C, Di Sabatino A, Noris P, Melazzini F. Isolated thrombocytopenia in pregnancy: A monocentric retrospective study of 63 pregnancies in 59 women. EJHaem. 2024 Nov 8;5(6):1125-1132. doi: 10.1002/jha2.957. PMID: 39691250; PMCID: PMC11647692.**

Thrombocytopenia during pregnancy is often thought to be associated with severe bleeding manifestations. Three are the main disorders associated with this condition: gestational thrombocytopenia (GT), immune thrombocytopenia (ITP), and inherited thrombocytopenias (ITs). Reaching the correct diagnosis of this condition has relevant therapeutic and outcome implications. We performed a retrospective, observational, monocentric study enrolling 59 consecutive women with isolated thrombocytopenia, attended to our referral center in the last 3 years. Together with personal and family history, platelet (PLT) count trend and mean platelet volume (MPV) in pregnancy are helpful for the diagnosis, with the highest PLT count in GT and lowest in ITs, with different timing of count decrease. MPV is significantly increased in both ITs and ITP. Misdiagnosis with ITP was responsible for unnecessary and unsuccessful therapy in some GT or ITs pregnant women, determining relevant side effects. Excluding inherited platelet function disorders (IPFDs), the bleeding risk for mother with thrombocytopenia and their newborns is similar to the general population. Vaginal delivery is associated with a



lower risk of bleeding than cesarean section and therefore is preferable whenever obstetrical-gynecological conditions permit.

- 7. Gurumurthy G, Reynolds L, Sutherland M, Thachil J, Grainger J. Service evaluation of R90 bleeding and platelet disorders gene panel in thrombocytopenia cases. Br J Haematol. 2024 Dec 9. doi: 10.1111/bjh.19947. Epub ahead of print. PMID: 39653062.**

This study examines the R90 bleeding and platelet disorders gene panel's utility in thrombocytopenia. The study analysed the correlations between the clinical features of patients with thrombocytopenia and genetic outcomes. The diagnostic yield was 46.6% (41/88) for the overall panel for all patients referred locally. Thrombocytopenia >12 months (95% CI = 19.0-191.0, $p < 0.01$), having a first-degree relative with thrombocytopenia (16 vs. 7, $p < 0.01$) and a higher platelet count nadir (67.9 ± 35.0 vs. $39.4 \pm 33.9 \times 10^9/L$, $p < 0.05$), were associated with genetic variants, suggesting these as indicators for genetic testing. This supports the R90's role in refining genetic testing criteria in thrombocytopenia.