

## Acquired aplastic anemia in adult

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The incidence of aplastic anemia (AA) varied worldwide, with the estimated annual incidence of AA in Western countries of 1.5–2.3 per million inhabitants per year, while the incidence was 2-3 times higher in Asia (3.0-7.5 per million). From a prospective multi-center nationwide population-based observational study of patients with AA in Thailand aged over 15, the annual incidence was 4.6 per million inhabitants. There was a higher annual incidence of severe (SAA) and very severe aplastic anemia (VSAA) (3.8 per million) than non-severe aplastic anemia (NSAA) (0.8 per million). The incidence was higher in the elderly, with a peak incidence of 14.4 per million inhabitants in patients older than 80 years old. Nevertheless, environmental exposure may have an impact on the diversity of geographical incidence in Thailand as the lowest incidence was in the central region (2.5 per million), whereas the incidence was higher in the north-eastern region, the largest agricultural area (5.6 per million) and the peak incidence was in the eastern region, the major industrial district (6.5 per million).

Due to the lack of matched donor and transplantation eligibility, only 3.6% of patients aged < 50 years with SAA/VSAA underwent hematopoietic stem cell transplantation (HSCT) in Thailand. Immunosuppressive therapy (IST) is recommended for patients with severe AA who are not eligible for HSCT. Horse ATG (hATG) is recommended over rabbit ATG (rATG) as first-line therapy. Due to the unavailability of hATG, rATG is widely used as an initial treatment in Europe and Asia. Among Thai patients with SAA/VSAA, the overall response rate (ORR) for patients treated with rATG & cyclosporin A (rATG±CsA) was superior to those treated with CsA and anabolic steroids (44.4% vs. 36.4% and 31.2%, respectively,  $P < 0.001$ ). Patients with SAA/VSAA receiving immunosuppressive therapy had better overall survival than those treated with the anabolic hormone.

In conclusion, the incidence of AA in Asia as well as in Thailand, is higher than in western countries, especially among the elderly. The real-world outcome of patients with SAA, especially in those aged over 60 years, is substantially poor. The appropriate therapeutic options, as well as the accessibility to advanced treatment, are needed to ensure a better outcome for patients.

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