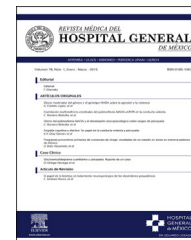




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## Editorial



In this edition, we will be focussing on two of the most important blood diseases in both Mexico and worldwide: anaemia and leukaemia. First, anaemia. According to Benoist et al., (based on data collected by the World Health Organization) worldwide prevalence of anaemia is alarming: 1620 million people are carriers of anaemia (24.8% of the total population). The largest population groups affected by the disease are women of childbearing age (41.8% [56 million] pregnant; 30.2% [468 million] non-pregnant) and children (47.7% [293 million] preschool; 25.4% [305] school age).<sup>1</sup> The situation in Mexico reflects that of most developing countries. In 2012, Shamah-Levy et al. found the national prevalence among non-pregnant women to be 11.6%, and 17.9% among pregnant women.<sup>2</sup> In the same year, Vanesa de la Cruz-Góngora et al., studying a paediatric population, found a 23.3% prevalence of anaemia among the 1 – 4-year group, 10.1% among the 5-11-year group, and 5.6% in children over the age of 12 years, in contrast to adolescents (7.7% in girls and 3.6% in boys).<sup>3</sup> Despite an apparent decrease in prevalence in Mexico, anaemia continues to be a public health problem that must be treated at the earliest opportunity.

Castellanos-Sinco, in a review of deficiency anaemia, describes the pathophysiology of megaloblastic anaemias, highlighting the importance of folic acid-vitamin B12 metabolism. The author stresses the importance of a correct use and interpretation of laboratory tests, and evaluates the different therapeutic strategies used.

In a second review article, Santoyo-Sanchez presents a proposal for nutritional recommendations in patients with deficiency anaemia, emphasising that iron supplements alone are not sufficient, and dietary changes must be made to maintain therapeutic effectiveness.

In a retrospective study, Barragán-Ibañes evaluates the therapeutic effect of the most commonly used iron formulations in Mexico in a cohort of 121 patients. The author shows that all formulations are equally effective, but that ferrous fumarate in monotherapy has the lowest rate of therapeutic failure.

The second half of the journal is devoted to original articles on lymphoblastic leukaemia, one of the most common forms of leukaemia in Mexico. Lymphoblastic leukaemia

is the most frequent form of the disease in the paediatric population, and accounts for up to 12% of all cases of leukaemia in the US (60% diagnosed in the under-20 age group). It is important to note that the Hispanic population of Mexico have a high risk of cancer, including lymphoblastic anaemia. In Mexico, the *Registro Histopatológico de Neoplasias Malignas* (Histopathological Register of Malignant Tumours) records around 1926 cases per year, which represents a rate of 2 cases per 100,000 inhabitants.<sup>4,5</sup> Current understanding of the disease is based on the recognition and identification of various genes that, due to their oncogenic potential, are indicators of poor prognosis. Perhaps the best-known of these is the BCR-ABL1 oncogene, which is detected more frequently in older patients. Less than 5% of paediatric patients have this gene, 25% to 35% of adults, and up to 50% of elderly leukaemia patients.

One of the main lines of research pursued by haematologists in our hospital concerns acute leukaemias. Olarte et al. found the frequency of BCR-ABL p190 expression among the Mexican population treated in the General Hospital of Mexico to be 14% lower than the rate reported in Europe, but higher than that reported in Latin America registers.

On the subject of haematology, Barranco –Lampón, in an original article, evaluates the risk of central nervous system infiltration in repeated traumatic lumbar puncture. Repeated traumatic lumbar puncture increases the relative risk of central nervous system infiltration in both adults and children. To reduce the risk, therefore, every effort should be made to ensure the procedure is performed by trained specialists with ample experience in the technique.

On the subject of benign pathology, Ramos-Peñañiel presents an article on the benefits of adding androgens to immunosuppressants in patients with aplastic anemia. This strategy was first described over 30 years ago in Mexico by Sanchez-Medal. However, following the introduction of different immunosuppressant drugs, androgens were largely sidelined until the early years of the 21st century, when Young et al. determined that the main benefit of androgens lies in their ability to shorten telomeres. This brought these compounds back into mainstream practice, and vindicated their true mechanism of action.

Finally, Espinoza-Elizondo presents a case study in essential thrombocythemia in a 3-year old girl to highlight the diagnosis of thrombocytosis in paediatric patients.

This edition of our journal includes review studies of particular importance for both specialists and primary care physicians, with evidence-based information on the importance of nutritional support in patients with anaemia. It also includes original research articles highlighting the concept of translational medicine, which ultimately aims to bridge the gap between the laboratory and clinical practice.

The review articles, original articles, and the case study presented in this edition illustrate some of the research lines pursued by the Haematology department of our hospital and the contribution made by this group of clinicians and researchers to the well being of patients suffering from blood-related diseases. They are of key interest not only to haematologists, but to all physicians with an interest in this field.

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