

## Hematological disorders following gastric bypass surgery: Emerging concepts of the interplay between nutritional deficiency and inflammation

Mingyi Chen UT Southwestern Medical Center, USA

**B**ariatric surgery is successful in inducing weight loss in morbidly obese individuals, but often is complicated by resultant hematological disorders. Although micronutrient deficiencies play a significant role, recent studies suggest a possible role for adipocyte-derived circulating inflammatory cytokines and hormones in the development of hematopoietic abnormalities. The evaluation of anemia and single or multilineage cytopenias after gastric bypass surgery must take into account, the unique features of the RYGB clinical setting. Attention to the time of onset of the cytopenia(s) is important, because inflammation, drugs and infections are more likely to occur in the first few months after surgery,

either as the direct agent of marrow suppression or as the trigger for immune cytopenia(s). Malnutrition including iron, copper and B<sup>12</sup> deficiencies should always be investigated as a potential precipitating or aggravating cause of cytopenia(s). Drug-related anemia and cytopenia(s) due to a variety of mechanisms, including perturbation of T-cell subsets leading to autoimmune cytopenia, should also be considered. Early investigation of the etiology of persistent cytopenia(s) by diagnostic bone marrow biopsy is warranted, because the cytopenia conditions usually have a better prognosis if early interventions are undertaken

e: myychen@ucdavis.edu