When medical treatment fails in a patient with idiopathic thrombocytopenic purpura (ITP)

An anesthetic-surgical challenge

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BACKGROUND

ITP is an autoimmune cause of thrombocytopenia.¹

Splenectomy is performed in the presence of refractory disease to medical treatment.² The optimization of hemostasis is critical to minimizing the risk of bleeding.¹

CASE REPORT

Man, 47 years-old, ASA III .

Diagnosis of diffuse large B cell Non-Hodgkin's lymphoma, treated with chemotherapy protocol and subjected to bone marrow (BM) autograft in 2010.

In 2014 he presented in Onco-hematology's (OH) appointment with severe thrombocytopenia associated with mucocutaneous hemorrhagic manifestations. A myelogram was performed, excluding BM pathology, and a thoraco-abdomino-pelvic CT scan revealed no disease relapse.

It was assumed the diagnosis of ITP. By refractory to medical treatment instituted (Prednisolone, Dexamethasone and Rituximab), with platelet count (PC) 16000, he was submitted to laparoscopic splenectomy under balanced general anesthesia.

Pre-operative optimization involved a multidisciplinary team. It was performed intravenous immunoglobulin (IVIg) and adrenal's insufficiency prophylaxis with hydrocortisone.

Conducted, in total, 2 platelet's transfusion pools, before induction of anesthesia and in the splenic hilum sealing time. Anesthetic-surgical time < 3 hours, uneventful, with hemorrhagic losses estimated in 200mL.. Transferred, extubated and hemodynamically stable, to the post-anesthetic care unit.

He was, then, transferred to the intermediate-care unit, and in the first 24 hours was discharged to the infirmary. 4 hours after the surgery, presented with PC 72000. On the 3rd postoperative day was discharged to home with PC 115000. The anathomo-pathological study of the spleen confirmed ITP. The patient remained with steroid therapy and surveillance in OH appointment.

Clinical situation	Therapy option
First line (initial treatment for newly diagnosed ITP)	Anti-D Corticosteroids: dexamethasone, methylprednisolone, prednis(ol)one
Second line	IVIg Azathioprine Cyclosporin A Cyclophosphamide Danazol Dapsone Mycophenolate mofetil Rituximab Splenectomy TPO receptor agonists Vinca alkaloids
Treatment for patients failing first- and second-line therapies	Category A: treatment options with sufficient data TPO receptor agonists Category B: treatment options with minimal data and considered to have potential for considerable toxicity Campath-1H Combination of first- and second-line therapies Combination chemotherapy HSCT

Treatment options for ITP are listed in alphabetical order and thus do not imply a preferred treatment option.

HSCT indicates hematopoietic stem cell transplantation; TPO, thrombopoietin; and IVIg, intravenous immunoglobulin.

Table 1 – Therapies for the treatment of ITP (adapted from *Blood*, 2010, 115(2))

DISCUSSION

The management of these patients, through careful and temporary administration of drugs, points towards PC > 30000, preferably > 50000, to face invasive procedures safely and with low drug toxicity. The half-life of transfused platelets is short, being extended by the administration of IVIg. The anesthetic and surgical approach is extremely relevant for the associated hemorrhagic risk. Thus, prior hemostasis optimization is critical.

LEARNING POINTS

ITP refractory to medical treatment implicates a multidisciplinary approach for the surgical and anesthetic risk. IVIg is an important preoperative agent in a scheduled surgical procedure.

REFERENCES

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