The Official Journal of the Italian Society for the Study of Hemostasis and Thrombosis
SISET
Società Italiana per lo Studio dell'Emostasi e della Trombosi
Corso Nazionale SISET
Bergamo | 23-25 ottobre 2025

29TH NATIONAL CONFERENCE OF THE ITALIAN SOCIETY FOR THE STUDY OF HEMOSTASIS AND THROMBOSIS, 2025

ABSTRACT N. CO32

MALATTIE EMORRAGICHE CONGENITE E ACQUISITE

MAJOR SURGERY IN PATIENTS WITH SEVERE HEMOPHILIA A WITHOUT INHIBITORS RECEIVING PROPHYLAXIS WITH FITUSIRAN.

E. Zanon, C. Simion, A. Napolitano, L. Spiezia, P. Simioni.

Haemophilia Center, First Chair of Internal Medicine, Department of Medicine, University-Hospital of Padua Medical School, Padua.

Background and Aims: Fitusiran is an RNA interference therapy that lowers antithrombin (AT) levels, thereby restoring hemostatic balance in patients with hemophilia A or B, regardless of inhibitor status. However, clinical experience with perioperative management of major surgery in patients receiving fitusiran is still limited. We report three major surgical procedures performed in two patients with severe hemophilia A without inhibitors, treated with fitusiran, focusing on coagulation parameters and clinical outcomes.

Methods: Two adult patients with severe hemophilia A without inhibitors, enrolled in the ATLAS-OLE trial and receiving monthly prophylaxis with subcutaneous fitusiran dat a dosage of 80 mg or 20 mg every 2 months as part of an investigational therapy, underwent the following major surgical procedures: (1) Patient 1 underwent a robot-assisted sigmoidectomy with colorectal anastomosis using the Knight-Griffen technique for the treatment of sigmoid adenocarcinoma; (2) Patient 2 underwent total right knee arthroplasty, followed by (3) joint revision, arthrolysis, and patellar resurfacing. We decided not to discontinue Fitusiran treatment prior to surgery, and also chose not to administer antithrombin to normalize antithrombin levels. Perioperative prophylaxis was conducted using low-dose FVIII, 10 IU/kg/day. Perioperative monitoring included antithrombin (AT, %), hemoglobin (Hb), prothrombin time (PT), activated partial thromboplastin time (aPTT), and factor VIII (FVIII) levels.

Results: The three major surgeries (two orthopedic and one abdominal) in patients with hemophilia A without inhibitors, with a mean age of 50.7 years (± 17.7 years), receiving prophylaxis with fitusiran, were completed without perioperative complications. The last administration of fitusiran occurred 15, 56, and 77 days before the surgery and the antithrombin (AT) activity level on the day of surgery were 14%, 23.1%, and 21.5%, respectively. A total dose of FVIII (Beriate) ranging from 65 to 90 IU/kg was administered throughout the hospitalization. The median FVIII levels during hospitalization were 27.4%, 13.6%, and 13.4%. Hemoglobin (Hb) values showed a mild/moderate decrease at discharge, with reductions of 0.6 g/L, 0.7 g/L, and 2.1 g/L in the three cases, without signs of active bleeding (Tab 1). Excellent hemostatic control was achieved in all surgeries, with minimal blood loss, and no patient required transfusions or showed signs of significant anemia. No antithrombotic prophylaxis was administered, and no clinical signs of thrombosis were observed during the entire course of treatment. The administration times of fitusiran were maintained according to protocol in the postoperative period.

Conclusions: In patients with severe hemophilia A without inhibitors undergoing fitusiran prophylaxis, major surgeries can be safely and effectively performed using low daily doses of FVIII. The use of fitusiran in this context has demonstrated its ability to provide adequate hemostasis throughout the perioperative period. It is important to emphasize that the absence of bleeding complications, the lack of significant anemia, and the absence of thrombotic events during the perioperative course further highlight the safety of this therapeutic strategy.

Email: *angela.napolitano@studenti.unipd.it*

	N.1	N.2	N.3
Hemophilia and inhibitor status	Severe HA without inhibitor	Severe HA without inhibitor	Severe HA without inhibitor
Age (years)	71	39	42
Weight (kg)	77	92	92
Fitusiran	Dose regimen ongoing, 80 mg/0.5 ml	Dose regimen ongoing, 80mg/0.5 ml	Dose regimen ongoing, 20 mg/0.2 ml
Last administration of Fitusiran (days before surgery)	15	56	77
AT activity level on day of surgery (%)	14	23.1	21.5
Type of procedure	Sigmoidectomy with colorectal anastomosis	Total right knee arthroplasty	Joint revision, arthrolysis, and patellar resurfacing
FVIII levels (%) – median until discharge	27.4	13.6	13.4
Perioperative hemostatic agents used (type and dose)	FVIII (Beriate), 10 U/kg	FVIII (Beriate), 10 U/kg	FVIII (Beriate),10 U/kg/die
Total dosage during hospitalization (U/kg)	90	86	65
Hb on day of surgery (g/L)	105	141	152
Hb at discharge (g/L)	99	134	131
AEs in perioperative period	No	No	No
Hemostasis efficacy rating	Excellent	Excellent	Excellent

Summary of perioperative management, hemostatic efficacy, and safety of three major surgical procedures under Fitusiran prophylaxis