

# COMPARING THE USE OF FONDAPARINUX VS ARGATROBAN AND DANAPAROID FOR THE TREATMENT OF SUSPECTED HEPARIN-INDUCED THROMBOCYTOPENIA

## Background

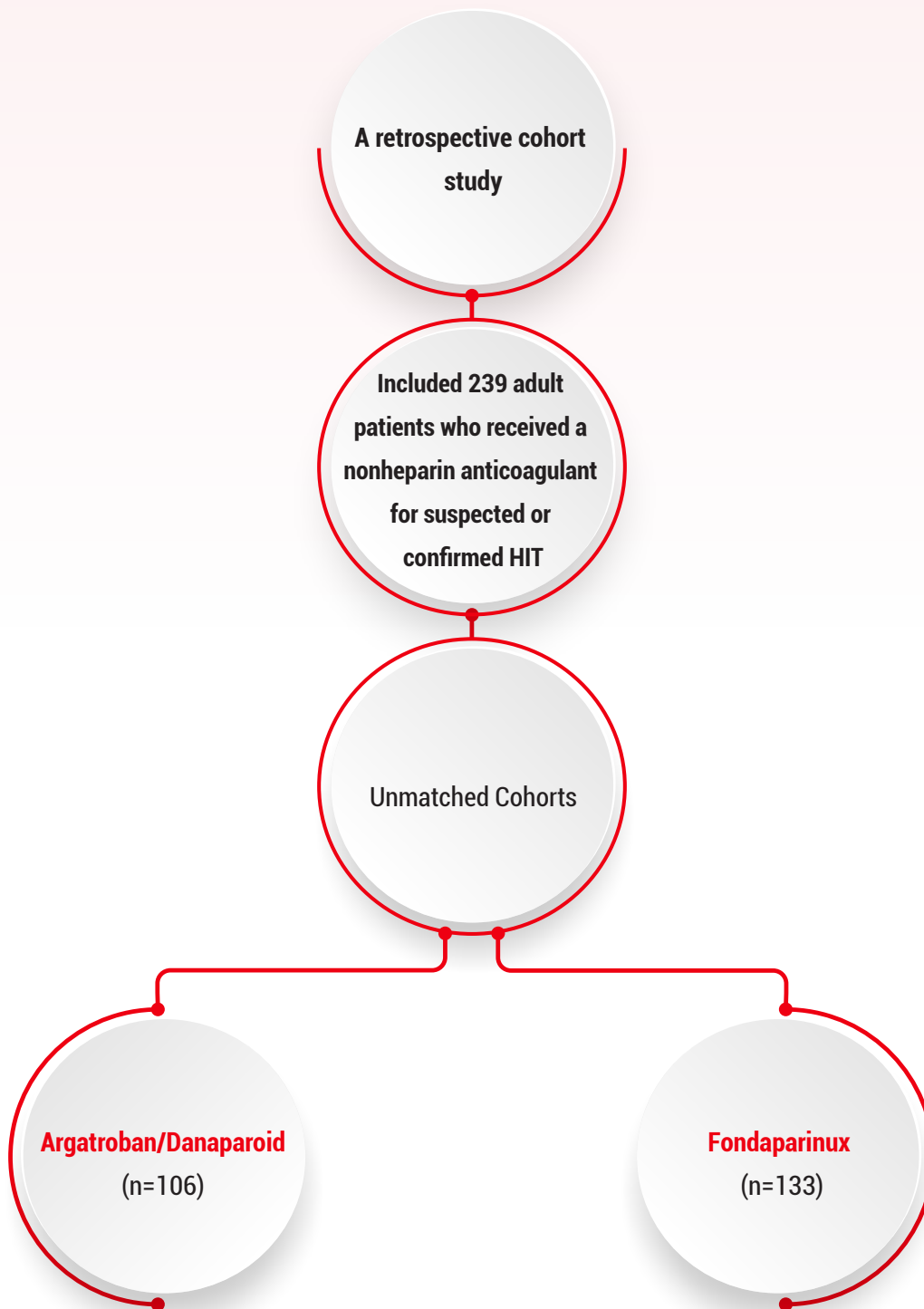
- ▶ It is recommended to stop all heparin products and switched to non-heparin anticoagulant if heparin-induced thrombocytopenia (HIT) is detected.
- ▶ Use of Danaparoid (a factor Xa inhibitor), argatroban, or lepirudin (both direct thrombin inhibitors) are suggested by the guidelines.
- ▶ Another factor Xa inhibitor, fondaparinux, appears to be an effective and safe option for the management of suspected HIT.
- ▶ However, the evidence supporting its use is sparse.

## Objective

The aim of the study was to compare the safety and efficacy of fondaparinux and the approved agents, danaparoid and argatroban for the treatment of patients with suspected HIT.

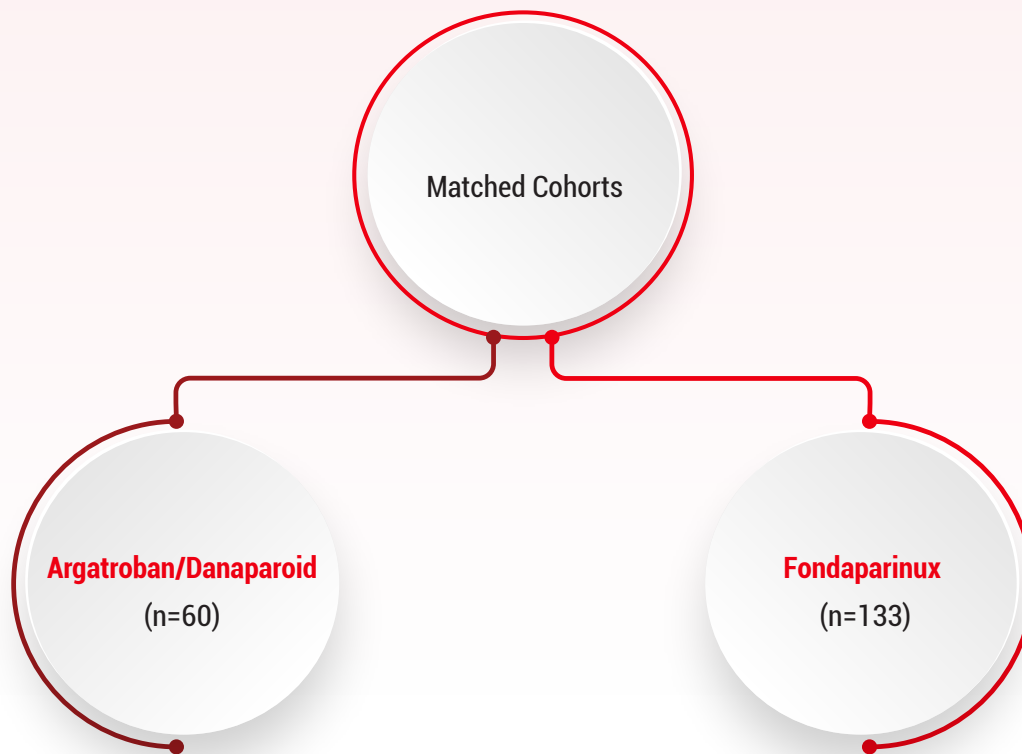


# Study details



A propensity score–matched analysis was performed to reduce potential bias. Age, gender, creatinine, 4T scores, and comorbidity index were used to construct the propensity score\* as they were relevant predictors of thrombosis and bleeding.

# Study details



\*A propensity score - "conditional probability of being treated given the covariates."

## Outcome measured

**Primary efficacy outcome:** Occurrence of new arterial or venous thrombotic event, amputation, gangrene, thrombosis-related death, or death in which a thrombotic event cannot be excluded.

**Primary Safety Outcome:** Occurrence of major bleeding event.

# Results

- ▶ There were 18% and 18.1% thrombotic events in the unmatched and matched cohorts respectively. (Table 1)
- ▶ There were 23% and 20.7% bleeding events in the unmatched and matched cohorts respectively. (Table 1)
- ▶ Additional analysis:
  - **Deaths during hospital admission: 41 in the argatroban/danaparoid group and 30 in the fondaparinux group ( $P=0.007$ ).**
  - **The bleeding events amongst diagnosed HIT patients receiving fondaparinux were more as compared to patients without a diagnosis of HIT.**

# Results

Table: Primary study outcomes

	Argatroban/Danaparoid (%)	Fondaparinux (%)	P- values
<b>Primary efficacy outcome</b>			
Unmatched cohort	19.8	16.5	0.392
Matched cohort	21.4	16.5	0.424
<b>Primary safety outcome</b>			
Unmatched cohort	25.5	21.1	0.420
Matched cohort	20	21.1	0.867

## Conclusion

In patients with suspected HIT, fondaparinux showed similar efficacy and safety argatroban and danaparoid. Prophylactic fondaparinux doses seem to be effective if no indication for full anticoagulation exists.



# Take home points

1

Fondaparinux has a similar safety profile as danaparoid or argatroban to prevent thrombotic events in patients with suspected or confirmed HIT.

2

Fondaparinux is less expensive and more convenient to use than the current standards.

3

Benefits of fondaparinux have been demonstrated in both *in vitro* and *in vivo* studies.

For the use of a Registered Medical Practitioner or a Hospital or a Laboratory.

**Reference:**

Kang M, Alahmadi M, Sawh S, Kovacs MJ, Lazo-Langner A. Fondaparinux for the treatment of suspected heparin-induced thrombocytopenia: a propensity score-matched study. *Blood*. 2015 Feb 5;125(6):924-9.