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COMPARING FONDAPARINUX WITH LOW-MOLECULAR-WEIGHT HEPARIN IN NON–ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION PATIENTS

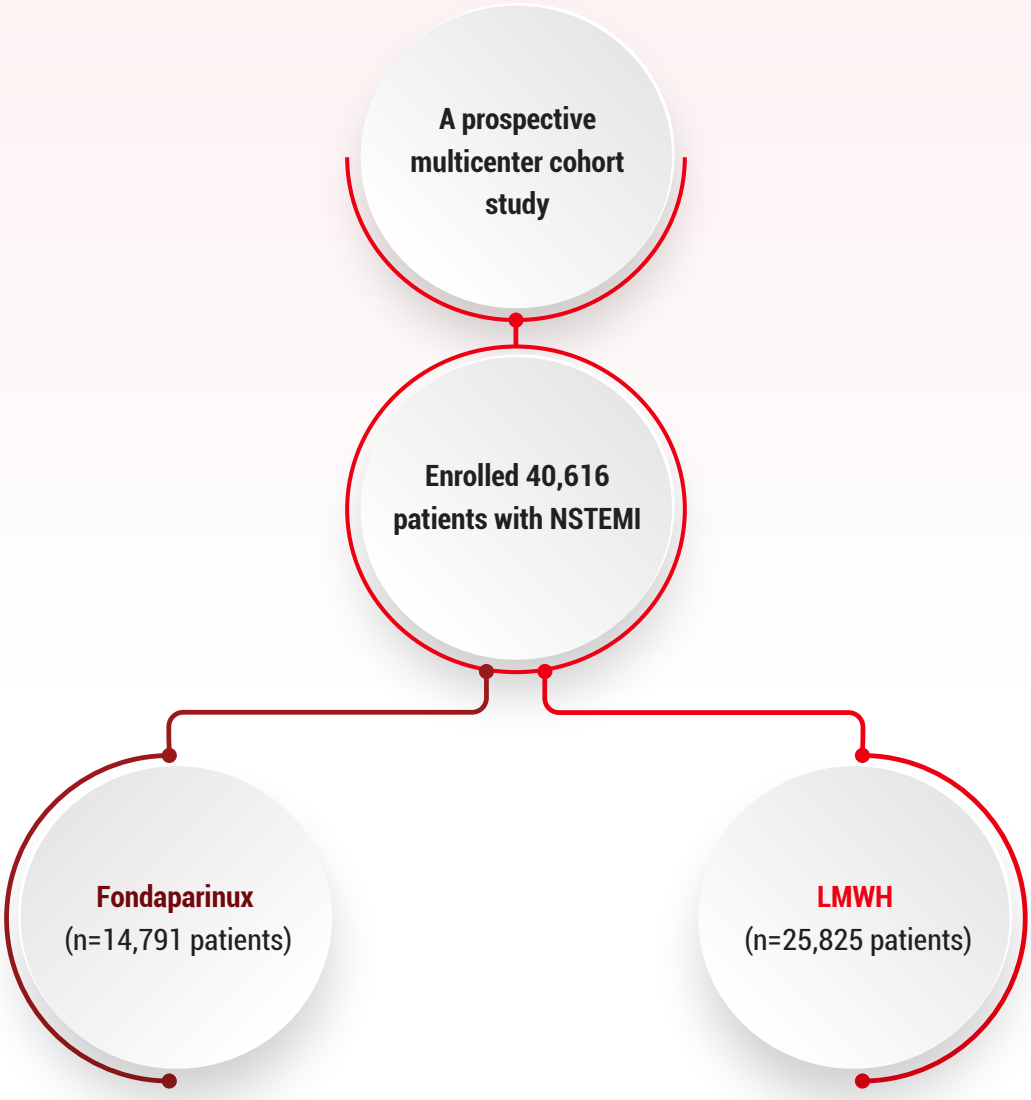
Background

- Bleeding events are linked with increased mortality, thus reducing bleeding events in patients receiving antithrombotic therapy is important.
- In patients with non–ST-segment elevation myocardial infarction (NSTEMI), fondaparinux reduces major bleeding events and improves survival as compared to the low-molecular-weight heparin (LMWH).
- Large-scale experience of the use of fondaparinux and LMWH in a non-trial setting is lacking.

Objective

The study aimed to investigate the association between the use of fondaparinux and LMWH in patients with NSTEMI.

Study details



Outcome measured

In-hospital severe bleeding events and death and 30- and 180-day major bleeding, death, stroke, and recurrent myocardial infarction (MI).

Results

▸ **Bleeding Events and Mortality: (Table)**

- The rate of severe bleeding while in the hospital or causing readmission was similarly lower in the fondaparinux group both at 30 days and 180 days.
- In-hospital mortality was lower in the fondaparinux group than in the LMWH group.

Results

Recurrent MI and Stroke (Table)

- The rate of recurrent MI and stroke in the fondaparinux group was lower than in the LMWH group.
- The adjusted odds of death were statistically significant at 30 and 180 days.

Table: Association between use of fondaparinux LMWH with various outcomes

Events	No. of events (%)		Odds Ratio (OR)
	Fondaparinux	LMWH	
In-hospital			
Bleeding	1.1	1.8	0.54
Death	2.7	4	0.75
30 days			
MI	9	9.5	0.94
Stroke	0.5	0.6	1.11
Death	4.2	5.8	0.82
Bleeding	1.4	2.1	0.56
180 days			
MI	14.2	15.8	0.97
Stroke	1.7	2.0	0.98
Death	8.3	0.68	0.76
Bleeding	1.9	2.8	0.60

Renal Dysfunction

- Fewer patients in the fondaparinux group had at least moderate renal dysfunction than patients in the LMWH group (Figure 1).

Percutaneous Coronary Infarction

- Patients in the fondaparinux group underwent in-hospital PCI more often than did patients in the LMWH group (Figure 2).

Sensitivity Analyses

- The results in the 3 sensitivity analyses were comparable with the main analyses -
  - In patients experiencing an MI for the first time
  - In the complete case analyses
  - In matched propensity score analyses

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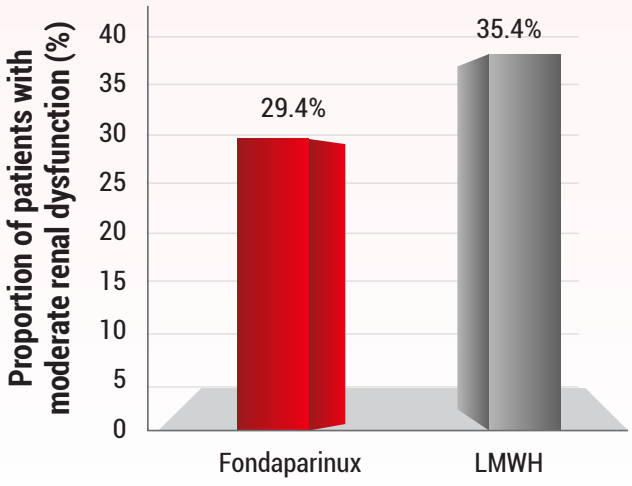

Figure 1: Proportion of patients with moderate renal dysfunction in both groups

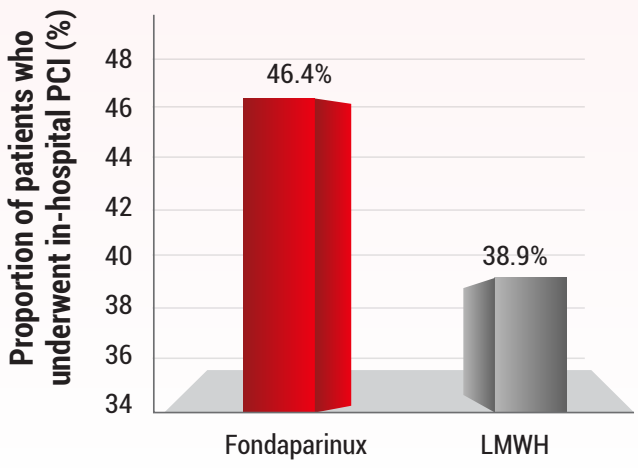

Figure 2: Proportion of patients who underwent in-hospital PCI in both groups

Conclusion

In conclusion, fondaparinux was linked with lower odds than LMWH of major bleeding events and death both in-hospital and up to 180 days afterward in NSTEMI patients.

Take home points

1. Fondaparinux was linked with a lower risk of bleeding events and death both in short-term and long-term follow-up as compared to LMWH.

2. Lower mortality due to lower bleeding rates might be attributable to fondaparinux's different mode of action, a more adjusted and relatively lower anticoagulant effect.

3. Overall, fondaparinux was linked with favorable outcomes in a non-selected NSTEMI population among whom 41.6% were treated with PCI.

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

Reference:

Szummer K, Oldgren J, Lindhagen L, Carrero JJ, Evans M, Spaak J, et al. Association between the use of fondaparinux vs low-molecular-weight heparin and clinical outcomes in patients with non-ST-segment elevation myocardial infarction. JAMA. 2015 Feb 17;313(7):707-16.