Background and importance
Portal vein thrombosis (PVT) represents a well-known complication during the natural course of liver cirrhosis, ranging from asymptomatic cases to life-threatening conditions related to portal hypertension and hepatic decompensation. Treatment of PVT in patients with liver cirrhosis is not well established.

Aim and objectives
To assess the safety and efficacy of low molecular weight heparins (LMWH) to treat PVT in cirrhotic patients.

Material and methods
Clinical charts of all patients treated with LMWH for PVT were reviewed for data on age, sex, aetiology of liver cirrhosis, presence of portal hypertension, congestive gastropathy (GC), hepatocarcinoma (HCC), treatment with LMWH, adverse events and follow-up.

Results
Sixty-one patients diagnosed with PVT and cirrhosis from January 2017 to June 2019 were evaluated for anticoagulation therapy. Forty-seven patients were men, median age 61 years (range 21–84). Aetiology of cirrhosis was: alcoholic (n=10; 16%), hepatitis C–HCV (n=9; 14%), alcoholic+HCV (n=7; 11%), hepatitis B (n=3; 5%), non-alcoholic fatty liver disease/non-alcoholic steatohepatitis (n=4; 6%) and other/combined aetiology (n=28; 48%). Portal hypertension and GC were present in 57 (93%) and 52 (85%) patients, respectively. Twenty-seven patients had HCC. Fifty-five patients (90%) were diagnosed with PVT, while 1 patient had PTV and cavernoma and 3 patients had other diagnosis. Treatment was performed with nadroparin (n=24; 39%), enoxaparin (n=35; 58%) and parnaparin (n=2; 3%), according to hospital availability. At follow-up in June 2019, 42 patients had discontinued therapy. Reasons for discontinuation were: complete or partial recanalisation (n=19; 31%), orthotopic liver transplantation (n=10; 16%), death (n=2; 3%), progression of liver disease (n=3; 5%) and other (n=8; 13%). Fifty-one patients had no adverse events; the only adverse events detected were bleeding and other (n=8; 13%). Fifty-one patients had no adverse events; the only adverse events detected were bleeding (n=19; 31%), orthotopic liver transplantation (n=10; 16%), death (n=2; 3%), progression of liver disease (n=3; 5%) and other (n=8; 13%). Fifty-one patients had no adverse events; the only adverse events detected were bleeding and other (n=8; 13%). Fifty-one patients had no adverse events; the only adverse events detected were bleeding and other (n=8; 13%). Fifty-one patients had no adverse events; the only adverse events detected were bleeding and other (n=8; 13%). Fifty-one patients had no adverse events; the only adverse events detected were bleeding and other (n=8; 13%).

Conclusion and relevance
LMWH were shown to be safe and well tolerated in our patients with only minor and transient side effects.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

PRESCRIPTION ANALYSIS OF DIRECT ACTING ORAL ANTICOAGULANTS
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Background and importance
The use of direct acting oral anticoagulants (DOACs) has increased in recent years. Their physiology and adverse effects require pharmaceutical monitoring in order to guarantee effective and safe treatment.

Aim and objectives
To analyse the prescription and utilisation criteria for DOACs in clinical practice as well as the acceptance of the pharmaceutical recommendations made.

Material and methods
This was a longitudinal prospective descriptive study of patients treated with DOACs (apixaban, rivaroxaban and dabigatran) admitted to a second level hospital (September 2018–March 2019). The information sources used were: Farmatools, Selene, Prescription Single Module and Horus. The variables analysed were: demographics, drugs prescribed, prescriptor service, indications, previous treatments, cause of the change, funding and pharmaceutical interventions.

Results
Seventy-three patients were assessed (50.68% women; median age 82 years (IQR 73–87); 50.68% were treated with apixaban, 30.14% with dabigatran and 19.18% with rivaroxaban. The main prescriber services were: cardiology (49.32%), internal medicine (30.13%) and geriatrics (9.59%). Reasons for treatment were: 97.26% for atrial fibrillation, 1.37% for deep vein thrombosis and 1.37% for pulmonary thromboembolism. A total of 80.82% had previously received treatment with acenocoumarol, 5.48% with DOACs and 13.70% had not received previous treatment. The main reasons for the change from acenocoumarol to DOACs were: poor control of the international normalised ratio (INR) (59.32%), vascular accident (15.26%) and haemorrhagic event (10.7%). Modifications from rivaroxaban to apixaban were observed in three patients: chronic kidney failure, age adjustment with kidney failure and haematological data altered. In addition, we observed a change from dabigatran to apixaban for gastritis. A total of 90.41% of patients had their treatment funded by the national health system. Dose adjustment was needed in 52.05% of patients, of which 86.84% were correctly made by the physician and 13.16% required pharmaceutical intervention due to kidney failure, age and/or weight, with a 60% acceptance rate.

Conclusion and relevance
The most used DOAC was apixaban, prescribed mainly by cardiologists to patients with atrial fibrillation, as opposed to acenocoumarol, mainly prescribed by haematologists. Most patients had previously been treated with acenocoumarol, failing on this treatment due to poor INR control. Most had their treatment funded by meeting the funding criteria. Dose adjustments were carried out, receiving a highly acceptance rate.

REFERENCES AND/OR ACKNOWLEDGEMENTS
No conflict of interest.

AUDIT OF ORAL ANTICOAGULANT PRESCRIBING; WHAT HAS CHANGED IN 4 YEARS?
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Background and importance
The Mater Misericordiae University Hospital (MMUH) formulary recommendations for oral anticoagulants (OACs) are in line with the Health Service Executive (HSE) Medicines Management Programme.1 2 Warfarin is the OAC of choice. Apixaban is the preferred direct oral anticoagulant (DOAC) if warfarin is unsuitable. Edoxaban,