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Anticoagulation with Edoxaban in COVID-19 patients

Abstract

The SARS-CoV-2 infection causes a thromboembolism and even disseminated intravascular coagulation (DIC). We enrolled 884 consecutive patients receiving edoxaban and with a positive Sars-Cov-2 swab, that were enrolled in our retrospective observational study and recruited in 7 Italian regions. About 884 positives patients the mean age was 71years, with a male/female ratio was 0,8%.87 (9,8%) were hospitalized while the remaining 797 (91,2%) were home isolated. From 87 hospitalized patients only 9 (1, 1%) were in the intensive care unit. Only 2 (0,3%) patients died. Albeit the limitations of the retrospective evaluation and the epidemiological analysis, there seems to emerge that treatment with edoxaban protects from the development of complications in patients with COVID-19.

Keywords: SARS-Cov-2, edoxaban, lethality, mortality, hospitalization, intensive care

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Abbreviations: DIC, disseminated intravascular coagulation; NVAF, non-valvular atrial fibrillation; VTE, venous thromboembolism

Introduction

The SARS-CoV-2 infection causes a complex set of symptoms in humans. It manifests with high indices of early complications, high lethality and mortality, and frequent access to intensive care unit.[1] The activation of coagulation has been frequently reported and is among the most fearful complications leading to widespread thromboembolism and even disseminated intravascular coagulation (DIC).[1,2] For this reason, it has been hypothesized a possible beneficial effect of heparin in the treatment of this syndrome.[2] To date, no data have been reported regarding direct oral anticoagulation. We have evaluated the effects of SARS-CoV-2 in patients receiving edoxaban for non-valvular atrial fibrillation (NVAF) or venous thromboembolism (VTE) prevention.

Methods

We recall 884 consecutive patients receiving edoxaban and with a positive Sars-Cov-2 swab, that were enrolled in our retrospective observational study and recruited in 7 Italian regions (Lombardy, Piedmont, Emilia Romagna, Lazio, Abruzzo, Puglia, Sicily). All patients were contacted by telephone in order to collect information related to health conditions of the past 6 months. We performed the recruitment from 15 may to 15 november.

Results

About 884 positives patients the mean age was 71 years, with a male/female ratio was 0,8%.87 (9,8%) were hospitalized while the remaining 797 (91,2%) were home isolated. From 87 hospitalized patients only 9 (1,1%) were in the intensive care unit. Only 2 (0,3%) patients died.

Discussion

Based on the epidemiological evaluations, published by the Italian National Institute of Health (collected until 15 november 2020), SARS-CoV-2 infection has an average penetration of 16.38% in the Italian population. The reported data underline increasing percentages of hospitalizations, lethality, and mortality with increasing age of patients, with a peak in the decade between 70 and 80 years, where hospitalization rate reaches 32%, hospitalization in intensive care units 12% and mortality reaches 6.6%.[3]

In our subgroup the rate of lethality and mortality are lower than in general population, with a reduction of the hospitalization in intensive units care. A comparison of the two populations has been proposed in Table 1. This result can be depend on the reduction of thromboembolic complication in this subgroup, with a reduction of all bad rates.

Table 1 A comparison of the two populations has been proposed

	Total Italian population (age 70-80 yeas) (n=51.237)	Edoxaban (n=884)	Chi squared
Hospitalizations	32%	9,8%	P < 0.01
ICU admissions	12%	1,1%	P < 0.01
Mortality	6.6%	3,4%	P = 0.01

Conclusions

Albeit the limitations of the retrospective evaluation and the epidemiological analysis, there seems to emerge that treatment with edoxaban protects from the development of complications in patients with COVID-19.

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Conflicts of interest

The authors declare there are no conflicts of interest.

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