Role of Clinical Pharmacist in the Optimisation of Nirmatrelvir/Ritonavir Prescription in the Emergency Department

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Background and importance

Nirmatrelvir/ritonavir (Paxlovid®) has been authorised for treating coronavirus disease. Due to multiple drugs metabolized by CYP3A may have significant interactions with ritonavir, physicians and pharmacists should work together for the safe and effective use of paxlovid.

Aim and objectives

Describe the pharmacist interventions (PIs) in the emergency department (ED) regarding optimisation of paxlovid prescriptions in non-hospitalised COVID-19 patients.

Material and methods

Observational prospective study 1-April-2022 to 31-August-2022 1000-bed university hospital. 

Clinical variables: demographic data (sex, age), vaccination status and comorbidities, hospitalisation and prescription with other therapies (such as remdesivir and baricitinib) after paxlovid treatment, posology, potential drug interactions and contraindications.

PIs were classified into the following types:

1. Dose adjustment
2. Contraindications
3. Potential interaction
4. Non-compliance with the indication

We also identified primary non-adherence to paxlovid.

Results

77 patients: 56% female  
Median age: 67 years (IQR 52-81). 
Fully vaccinated: 87%. 
12% required hospitalisation. None of them died.

The percentage of patients with PIs was 70%. The total of PIs carried out was 87:

46 potential interactions were detected. Primary non-adherence was detected in 10% of patients. 100% of PI were accepted.

Intervention

Conclusions

Hospital pharmacists are key in the optimisation of paxlovid prescriptions. Due to the recent conditional marketing authorisation of paxlovid, it is important multidisciplinary work to reduce potential dosing errors and adverse reactions, increasing patient safety.