<Date>

Caspofungin: Avoid use of polyacrylonitrile membranes during continuous renal replacement therapy.

Dear Healthcare Professional,

<Name of marketing authorisation holder> in agreement with the European Medicines Agency

and the <National Competent Authority> would like to inform you of the following:

Summary

- **In patients treated with caspofungin during continuous renal replacement therapy, the use of polyacrylonitrile-based membranes should be avoided.**
- **Cases describing caspofungin ineffectiveness in patients undergoing continuous renal replacement therapy using polyacrylonitrile filter membranes have been reported.**
- **The risk of antifungal treatment failure may lead to worsening of the systemic infection, which may ultimately lead to death.**
- **It is recommended to use an alternative extracorporeal membrane or an alternative antifungal.**

Background on the safety concern

Caspofungin is a sterile, lyophilized antifungal for intravenous infusion indicated for the treatment of invasive fungal infections in adult or paediatric patients and for the empirical therapy of presumed fungal infections in febrile, neutropenic adult or paediatric patients (see SmPC for the full indication).

The recommendation to avoid polyacrylonitrile (PAN)-based membranes in patients undergoing continuous renal replacement therapy (CRRT) and receiving treatment with caspofungin follows an analysis of reports of suspected ineffectiveness of caspofungin used in these conditions, and *in vitro* studies suggesting sequestration of this antifungal by PAN-based membranes:

- A literature case describing reversing candidemia when starting and stopping CRRT using PAN filter membrane[1] and four fatal cases describing caspofungin lack of efficacy in patients undergoing CRRT with the same membrane type.

- Two *in vitro* studies suggesting caspofungin adsorption by PAN membranes[2,3]. Sequestration persists even after increasing the caspofungin dose[3].

Any modification in caspofungin plasma concentrations may result in therapeutic failure. Ineffective treatment in these critically ill patients can have fatal consequences. It is recommended to use another extra-renal purification membrane in these patients, or another antifungal in accordance with the attending physician's clinical judgment and decision.

The product information of caspofungin-containing medicines will be updated to inform healthcare professionals of the suspected risk of sequestration.

Call for reporting

Healthcare professionals should report any suspected adverse reactions, lack of effectiveness and/or product quality complaints associated with the use of caspofungin, including batch/lot number, in accordance with the national spontaneous reporting system <*include the details (e.g. name, postal address, fax number, web address) on how to access the national spontaneous reporting system*>. Healthcare professionals are encouraged to specify the type of membrane used in case of CRRT.

Company contact points

Further information can be obtained by contacting <*local MAH affiliate contact details to be added by affiliate*>.

List of literature references

1. Raphalen, J.-H., Marçais, A., Parize, P., Pilmis, B., Lillo-Lelouet, A., Lamhaut, L., & Baud, F. J. (2021). Is caspofungin efficient to treat invasive candidiasis requiring continuous veno-venous hemofiltration? A case report. Therapies, 76(5), 512–515.

2. Baud, F. J., Jullien, V., Secrétan, P.-H., Houzé, P., & Lamhaut, L. (2021). Are we correctly treating invasive candidiasis under continuous renal replacement therapy with echinocandins? Preliminary in vitro assessment. Anaesthesia Critical Care & Pain Medicine, 40(1), 100640.

3. Baud, F. J., Jullien, V., Desnos-Ollivier, M., Lamhaut, L., & Lortholary, O. (2023). Caspofungin sequestration in a polyacrylonitrile-derived filter: Increasing the dose does not mitigate sequestration. International Journal of Antimicrobial Agents, 62(6), 107007.

DHPC COMMUNICATION PLAN	
Medicinal product(s) / active substance(s)	**Caspofungin**
Marketing authorisation holder(s)	<Name of marketing authorisation holder>
Safety concern and purpose of the communication	Avoid use of polyacrylonitrile membranes during continuous renal replacement therapy in intensive care patients.
DHPC recipients	Healthcare providers who order, verify, or administer caspofungin in an ICU setting, specialists (e.g. intensivists, nephrologists, infectious diseases) and hospital pharmacists. The target group will be further defined at the national level, in agreement with the respective national competent authority.
Member States where the DHPC will be distributed	The DHPC will be distributed in Member States where caspofungin is currently on the market and polyacrylonitrile membrane is available.

Timetable *Delete steps which are not applicable*	**Date**
DHPC and communication plan (in English) agreed by PRAC	04 September 2025
DHPC and communication plan (in English) agreed by CHMP	18 September 2025
Submission of translated DHPCs to the national competent authorities for review	25 September 2025
Agreement of translations by national competent authorities	02 October 2025
Dissemination of DHPC	09 October 2025