

Scientists at the University Hospital of Cologne Recommend on Antifungal Prophylaxis for Leukaemia Patients

Professor Dr Oliver A. Cornely and Dr Jannik Stemler from the University Hospital of Cologne have published an article in *The Lancet Haematology* on antifungal prophylaxis for patients with acute myeloid leukaemia*.

Invasive fungal infections are difficult to diagnose, and their treatment is very complicated and lengthy. Although they occur regularly and affect immunosuppressed patients, in particular there are only a few doctors who specialise in these rare infections. Professor Cornely's research group at the European Confederation of Medical Mycology (ECMM) Excellence Center in Cologne is working on developing guidelines for the correct diagnosis and treatment of invasive fungal infections. After all, patients' lives depend on the rapid detection of infections and practised treatment procedures.

In the currently published article, the question is examined whether it makes sense to treat patients with acute myeloid leukaemia under therapy with new targeted substances with antifungal drugs as a precautionary measure during chemotherapy administration to prevent fungal infections. Due to a higher chance of survival, this is recommended in the current guidelines. However, the risk-benefit ratio of a purely prophylactic treatment and possible interactions with other drugs have not yet been examined in clinical studies, which leads to uncertainties among treating physicians.

To close this gap, the professional society European Haematology Association has commissioned a group of experts to revise these recommendations and to create an up-to-date guideline on the usefulness of prophylaxis and possible interactions. "The treatment of leukaemia and fungal infections is complex and, depending on the individual patient, very different drugs are chosen. We were interested in whether one can make a general recommendation at all, given this diversity," explains Dr Stemler, who played a major role in the publication. "We systematically searched the literature in various databases and looked at different clinical studies to collect as much meaningful data as possible. Unfortunately, the data is very limited, so that we have to make decisions largely based on expert knowledge. Nevertheless, we were able to gather information on the general course of the disease and on the occurrence of fungal infections and their consequences with 20 different drugs."

From this collection of data, the scientists have compiled a table in which they give recommendations on antifungal prophylaxis for different therapies. Professor Cornely, head of the research group, is proud of the success: "This is the first guideline that supports clinical decision-making on antifungal prophylaxis in patients with acute myeloid leukaemia treated with targeted drugs. These antileukaemic substances are increasingly being used. In fact, such preventive treatment cannot always be recommended to the same extent. Our differentiation facilitates the decision of the treating physicians and thus hopefully improves the quality of therapy and the quality of life of the patients".

The Centre of Excellence at the University Hospital of Cologne is an important partner of the professional association ECMM and is committed to worldwide improvements in the diagnosis and therapy of fungal diseases. Current projects include, for example, the "One World One Guideline" programme, which pools expert knowledge on various fungal species worldwide and derives specific recommendations.

*Certain form of leukaemia in which blood formation in the bone marrow is disturbed.

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Further information:

<https://innere1.uk-koeln.de/klinik/europaeisches-exzellenzzentrum-fuer-invasive-pilzinfektionen/>

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"Progress Report 2017-2021" (information about the projects of the Excellence Center Cologne):

<https://www.ecmm.info/ecmm-excellence-centers/excellence-centers/> (Excellence Center Cologne)

