CORRESPONDENCE

Myelodysplastic Syndromes: Diagnosis, Prognosis, and Treatment

by Prof. Dr. med. Ulrich Germing, Prof. Dr. med. Guido Kobbe, Prof. Dr. med. Rainer Haas, Prof. Dr. med. Norbert Gattermann in volume 46/2013

Copper Concentrations Should Be Measured Under Any Circumstances

The citation from the European Leukemia Net that the authors used in their article (1) has an online appendix 1 in the 24 October issue of *Blood*, which in 26 points raises the clinical key questions of the myelodysplastic syndrome (MDS). This is very helpful in the context of this disorder.

Table 1 in the article by Germing et al. shows the differential diagnoses to MDS and, among others, mentions copper deficiency. When considering the median age of patients with MDS and bariatric surgery—which has increased in the meantime—then in the diagnostic evaluation of MDS copper concentrations should be measured, at least for the group at low risk (2). The cytogenetic risk groups are subject to certain driver mutations of MDS, which are implemented as significant prognostic variables (3). For low-risk MDS, idiopathic cytopenia of undetermined significance (ICUS) and idiopathic dysplasia of uncertain significance (IDUS) represent an additional challenge.

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Dr. med. Antonis G. Tsamaloukas
Hilden
tsamaloukas@oxphos.de

In Reply:

Tsamaloukas has drawn attention to three aspects that may have a role in the diagnostic evaluation and prognostic assessment of myelodysplastic syndromes, on which we would like to focus in our response.

Copper deficiency may indeed lead to anemia, neutropenia, and a sideroblastic or myelodysplastic phenotype (1, 2). The most common cause of copper deficiency is an excessive intake of zinc, but bariatric surgery can also cause copper deficiency. A targeted medical history and if required the measurement of copper concentrations can be useful in terms of a possible differential diagnosis in the low risk groups.

The importance of the many different mutations for assessing the prognosis of patients with MDS has not yet been sufficiently studied. Papaemmanuil et al. show that some mutations are of prognostic relevance independently of IPSS-R. A strict correlation between the occurrence of chromosomal aberrations and certain driver mutations was not shown, however. Mutation analyses will probably assume a far greater role in future diagnostic evaluation and prognostic assessment.

The provisional entities of idiopathic cytopenia of undetermined significance (ICUS) and idiopathic dysplasia of uncertain significance (IDUS) are helpful tools for the description of cytopenias and dysplasias that cannot be categorized satisfactorily by using the classification systems for MDS and which cannot be distinguished satisfactorily from cytopenias and dysplasias with other causes. ICUS and IDUS have not been studied sufficiently, but one thing is certain: a proportion of ICUS cases turn out to be clonal MDS disorders that can be identified only by using molecular methods (3). A project run by colleagues in Vienna (lead investigator: W Sperr) is currently collecting cases of ICUS and IDUS in a registry in the framework of the German-Austrian-Swiss MDS working group; the objective is to better characterize these entities.

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Prof. Dr. med. Ulrich Germing
Klinik für Hämatologie,
Onkologie und Klinische Immunologie
Heinrich-Heine-Universität Düsseldorf
germing@med.uni-duesseldorf.de

Conflict of interest statement

The authors of both contributions declare that no conflict of interest exists.