Operate on fractures near the hip joint as soon as possible

Fractures close to the hip joint mainly affect people over 70 years of age. Prompt surgery is essential for a good prognosis. However, it is not possible to determine when a patient has taken an anticoagulant drug - i.e. a direct oral anticoagulant (DOAC) - testing procedures should be used. This is provided for in the decision of the Joint Federal Committee of 22 November 2019. Dr. Michael Caspers, senior physician at the Clinic for Orthopaedics, Trauma Surgery and Sports Traumatology at the Cologne City Clinics and head of the Hip-6-study, in which reliable DOAC threshold values are defined for a safe start to surgery, explains what needs to be observed in detail.

Dr. Caspers, what is typical for fractures close to the hip joint?

Dr. Michael Caspers: Of the almost 120,000 people affected every year in Germany, about 80% are 70 years and older. Fractures close to the hip joint therefore play a very important role in the field of geriatric traumatology. Not only because it is a common fracture, but also because it is a serious injury that massively changes the lives of affected patients, limits their mobility and places a long-term burden on their health. Many who previously lived independently often need help and more intensive care from day one to the next.

How does the treatment work?

Caspers: Most patients are brought to us by the ambulance service and are first treated at the emergency room. An initial fracture diagnosis, a fixed radiological diagnosis and then advice on the further procedure take place there. As part of the pre-operative preparations, concomitant diseases and the ability to undergo surgery are checked, and laboratory parameters are also determined.

Caspers: The small blood count and other blood cell parameters as well as the coagulation status are collected. Findings from the clinical chemistry with organ parameters such as kidney function and inflammation values are also important. In anticoagulated patients with direct oral anticoagulant, renal function determines how quickly substances are excreted. In addition, it is important to determine the limitations of organ functions and to see whether, for example, an accompanying infection disease such as pneumonia or a urininary tract infection is present, because they influence the ability to perform surgery and the postoperative management.

What is the prognosis?

Caspers: This depends on various factors. There are many studies that show that patients with fractures close to the hip joint benefit from an rapid fracture treatment.

If it has been proven that the prognosis in terms of morbidity and mortality as well as in functional outcome depends on the timing of the operation. For example, pneumonia or bedsores occurs much more frequently, and the treatment is more prone to complications. And it is why the initially very positive approvals of hip fractures with fractures close to the hip joint should be operated on as quickly as possible and at the latest within the first 24 hours after admission to hospital came into force.

Are there any exceptions?

Caspers: Not always. Because in the patient cohort of the over 70s, there are many patients who are anticoagulated with different substances, and anticoagulated medication is a frequent obstacle when it comes to operating on patients within 24 hours. In the past, many years ago, before the new oral anticoagulants were available, the main drug used was Marcumar. Thanks to an ambulant, the anticoagulant effect could be abruptly reversed, so that nothing stood in the way of surgical treatment. That is no longer so today.

What has changed?

Caspers: The anticoagulant effect of DOACs cannot simply be reversed in an emergency. There are antithrombins for some substances, but they are very expensive and absolutely not sufficient for the treatment of fractures close to the hip joint. In most, most of these drugs have an effective lifetime of 24 hours with normal kidney function. This means that you have to wait 24 hours after the last dose before you can operate. If the kidney function is limited, it takes even longer depending on the prescription - sometimes 48 to 72 hours. In the worst case, depending on the preparation, kidney function and risk of bleeding, it can take even 30 hours until the substance is safely eliminated from the body.

How do you deal with this problem in everyday life?

Caspers: Our standard procedure at our institution has been that patients with DOACs have waited for four days operating depending on their renal function. This means that the DOAC patients with normal kidney function were operated on as early as at the breakdown, 24 hours after hospital admission.

Caspers: Patients with impaired kidney function were operated on only after those 24 hours, knowing that the patient would wait a little longer for his operation. But the risk of bleeding was just too high for us.

There were also exceptions?

Caspers: Yes, we noticed that there was a proportion of patients, for example from old people’s homes, who were not exactly sure whether they were anticoagulated at all. There were DOACs in the medication plan, but the patients didn’t even know in the emergency room whether they had taken the drugs. In these patients, we then started taking measurements and initially a plasma determination. When the point of care test with the DOACs test strip from the company Bioclin hit the market, we used it to qualitatively examine whether anticoagulation with a DOAC was present or not. If it was the case, the patients waited depending on their kidney function, otherwise, the patients were operated on immediately.

The GBA has decided that such a test must always be provided. Is this true?

Caspers: The Federal Joint Committee has decided that coagulation diagnostics specific to DOACs must be carried out within the first 24 hours for patients on DOACs.

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