

Reduce mortality rates: Optimizing the treatment of fractures in the elderly

The importance of fractures in the elderly is rapidly growing. Still there are a lot of unsolved problems in surgery and care. Prof. Dr. Jes Bruun Lauritzen, chairman of the EFORT Instructional Course “Fractures of the elderly” which will be held in September in Copenhagen, discusses surgery problems, new techniques and a highly successful new hip-fracture-program which reduces the mortality rate in patients.

Prof. Bruun Lauritzen, why has the treatment of fractures in the elderly become so important in recent years?

With significant changes in population, we now face new challenges in dealing with diseases. Fractures in the elderly will surely be one of the major problems due to the demographic development. These injuries often induce a long stay in hospital, with many people occupying beds for long periods and the mortality rate is very high. The current death rate of hip-fracture patients averages 15 to 25 percent, the mortality that follows hip fracture in patients at nursing homes is at 40 percent. So at the end of the day, advances in treatment will not only be a medical, but a socio-economic issue.

What problems do orthopaedics face in this particular field of surgery?

The treatment options do not always alleviate the loss in physical functions and many fractures pose unsolved problems in surgery and care. Take for example displaced neck fractures of the femur, comminuted and displaced fractures in the proximal humerus, elbow and distal radius and not to forget periprosthetic fractures around knee or hip arthroplasties. There are also problems with rehabilitation as it is often threatened by concomitant neuromuscular and chronic diseases. So there is a lot of work to be done.

Are you going to cover all these topics at the EFORT Instructional Course in Copenhagen?

Yes, we focus on these matters with a broad panel of specialists. Experts from EFORT and ESTES will demonstrate the latest techniques and treatment options. This is why the workshops are so important; they are part of the educational programme to obtain the adequate operation skills and techniques. There is also going to be a video transmission of a live operation that will be carried out by television professionals, and of course we are going to discuss the “optimized hip fracture programme”, that we run in our hospital.

What is so special about the “optimized hip fracture program”?

We initiated this project in 2004. It is a special program for hip-fracture patients pre- and post surgery. When a patient arrives in the emergency area with a suspected hip fracture, initially we apply a femoral nerve catheter with bupivacain. The catheter is the core element of the program – it has to stay for ten days. We can very accurately regulate the doses of medication with it. This is important because studies have proven that patients receive on average 30 percent more morphine than necessary. The catheter is inserted by an anaesthesiologist, and the orthopaedic surgeon will be the first to see the patient after X-ray documentation of the fracture.

What is the advantage for the patients?

Hip fracture patients are relieved from their pain immediately and can be operated on sooner. Another benefit is that the fast and thirst period before surgery is reduced to six hours instead of 13

hours, with an actual non-drinking period of two hours before surgery. That is also a major improvement regarding the corporal and mental state of the patients. Without food and drink, they are weak and dehydrated before the operation, which is not good. Now, they can receive fluids, proteins and electrolytes until shortly before surgery, which minimizes the risk of complications and mortality. The medical data is proving us right; with the program we have reduced the complications and mortality significantly. We have also improved rehabilitation and the duration of hospital stays – without going into details right now.

What do you personally like most about IC courses?

Honestly, I just like the idea of orthopaedic surgeons and trauma surgeons coming together and exchanging their experiences, especially during the workshops. It is important to learn from each other and to put the newly-learned procedures into practice. One participant cannot implement a whole hip fracture program in his department alone, but maybe he can motivate his colleagues to have discussions about making improvements. That's a good thing.