Quest for the optimal surgical procedure

The ultimate vision is for all patients to leave their beds straight after surgery and get on with their ordinary lives. And so the quest for the optimal surgical procedure steadily continues at the Section for Surgical Pathophysiology at Rigshospitalet.

Ten to fifteen years ago, patients used to be hospitalised for 10-14 days after major intestinal surgery. However, a novel, almost revolutionary concept has changed this completely. Since the introduction of fast-track surgery, even elderly patients can be discharged within a few days after intestinal surgery.

“That really opened the eyes of the world to the possibilities offered by fast-track surgery. Even though hospitals can obviously cut costs significantly by using these accelerated procedures, the main intention has always been to enhance the quality of care, which is what we're doing by getting patients out of hospital and back to their normal, active lives,” explains Professor Henrik Kehlet from the Section for Surgical Pathophysiology.

Global concept
He is the man behind fast-track surgery, which aims to ensure pain and risk-free operations. Since the method first featured in scientific publications, the concept has spread successfully from one special area of surgery to the next – as well as from one country to the next. Today, the concept is global, and the section at Rigshospitalet works in close partnership with major hospitals and universities throughout the world.

The principles of fast-track surgery are applied today in breast, orthopaedic, abdominal, gynaecological, urological, lung and vascular surgery more or less throughout the world. It means that patients are being discharged from hospitals much sooner than before and are experiencing fewer complications or after-effects. However, even though this in itself is a success story, Henrik Kehlet does not want to stop here.

“It's a dynamic process which will not be completed until all major surgery requires only brief hospitalisation, minimum rehabilitation and a short convalescence period. Although we've made great progress in recent decades, there's still a lot to do and plenty to research. Therefore, international cooperation is vitally important,” Henrik Kehlet stresses.

Looking at all aspects
Fast-track surgery does not by any means focus exclusively on the surgical intervention in an effort to accelerate the overall treatment procedure, explains Henrik Kehlet. It is a complex, multidisciplinary exercise.

“The point is to optimise the individual components of the entire patient procedure. The intervention should be minimally invasive and employ keyhole surgery and robot-assisted surgery where this is advantageous. We investigate pain treatment to optimise it and seek constantly to increase our knowledge about the body organ dysfunctions during and after a surgical procedure,” says Henrik Kehlet, and continues:

“In the case of surgery, the brain is under stress, especially in the case of elderly patients; cardiac function decreases, many patients’ sleeping patterns are disturbed and they have an increased risk of thrombosis. They lose muscle strength etc. We're studying all these components of surgery in collaboration with our colleagues all over the world.”
Facts about the Capital Region of Denmark

The Capital Region of Denmark is one of five regional administrative units in Denmark. The Capital Region of Denmark provides healthcare, mental healthcare, carries out research and regional development for 1.7 mio. people or approx. 30% of the population in Denmark. In addition to hosting the largest health care system in Denmark, the region is also home to one of the world’s strongest life science clusters, and 70% of Denmark’s biotech companies are located in the area.

The Capital Region is home to a number of specialist environments at the nine university hospitals in the region that perform world-class health research and have the ability to translate this new, innovative knowledge into pioneering health care services and treatment of the highest international standard. In order to highlight and acknowledge these environments, in 2010 – 2013 the Global Excellence – in Health award has been presented to a total of 22 hospital and university environments.

Denmark is in fourth place among the OECD countries regarding scientific publications per inhabitant and similarly in third place regarding citations. Accordingly health research in the Capital Region ranks among the best in Europe. In close collaboration with the University of Copenhagen, The Technological University of Denmark, the Capital Region of Denmark represents frontline health science and clinical research, together with research of high quality in other areas with relevance for development of future healthcare.

Health research is carried out for approx. EUR 185,000,000 annually at the university hospitals in the region (including internal as well as external funds).

Sources: OECD Territorial Reviews: Copenhagen, Denmark (OECD, 2009); Research Barometer 2012 (Danish Agency for Science, Technology and Innovation, 2012)

Facts about Global Excellence – in Health

The Global Excellence programme seeks to recognise and highlight the leading research and therapy environments in the field of healthcare in the hospitals and universities of the Capital Region of Denmark. The programme was established in 2010 in close cooperation with the University of Copenhagen and The Technical University of Denmark (DTU). The purpose of this initiative is to encourage internationalisation of the Region’s excellent research and therapy environments with a view to attracting international partners, researchers, talents and both private-sector and public funding for research. The programme comprises the awarding of one or two prizes each year, followed up with focused support in the form of consultancy, tools, website development, conferences, etc.

The Global Excellence award is given to the hospital and university environments in the region that perform first-rate international level research leading to the development and implementation of new, pioneering healthcare services, treatment methods and products for the benefit of patients. The selected Global Excellence environments have been chosen by the executive committee of the Capital Region of Denmark on the basis of evaluations by a specialist review committee of national as well as international experts. The awardees are characterized by unique efforts within one or more areas such as: The extent and quality of their research and development, teaching, examination and treatment of patients, and innovation and dissemination of the new knowledge. In addition to the Global Excellence distinction, which is valid for a period of five years, the awardees each receive a grant of EUR 200,000 to help strengthen and further their international profile.

Sources: OECD Territorial Reviews: Copenhagen, Denmark (OECD, 2009); Research Barometer 2012 (Danish Agency for Science, Technology and Innovation, 2012)