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People who are severely overweight need joint replacement twice as often and face double the risk of complications

Obese people need artificial knee joints twice as often as people of normal weight. They also face twice the risk of complications, researchers reported at the EFORT Congress in London. The use of patient specific guides for knee surgeries could be the future method of choice for obese patients.

London, June 4, 2014 - The obesity epidemic has arrived in orthopaedics: Anyone who gets a hip or knee replacement today is very likely to be overweight, according to experts at the 15th EFORT Congress in London. The situation presents a major challenge for orthopaedic surgery. For new studies show that anyone hitting the scales with too many kilos is at higher risk of complications. The Congress is organised by the European Federation of National Associations of Orthopaedics and Traumatology (EFORT) as a combined programme in partnership with the British Orthopaedic Association (BOA). Patient safety is the main theme of this major medical meeting which brings together more than 7,000 participants.

More kilos weighing on first knee prostheses

People who need their first knee replacement these days tend to be heavier than candidates for prosthetics in past decades, according to a Scottish long-term study. The study compared 686 patients who underwent primary total knee arthroplasty between December 1994 and August 1998 with 1,408 patients who underwent such surgery between January 2009 and November 2012. "The patients in the second group had an average BMI of 32.0 kg/m², significantly higher than patients in the first group who weighed in at 29.4 kg/m² on average," study author Dr Ewan Barclay Goudie (Victoria Hospital, Kirkcaldy) reported at the EFORT Congress.

Risks increase beyond a BMI of 35

A new Swiss study shows when an increased body mass index (BMI) becomes problematic. "Obese persons with a BMI of 35kg/m² and more are particular risk candidates for reoperations and infections. As compared to patients with BMIs below this value, they needed double the number of revisions and suffered deep infections twice as often. The effect was higher in men than in women," said Dr Matthieu Zingg from the University Hospital in Geneva. Data from nearly 2,500 patients with knee prosthetics were analysed for the study.

Obese persons need twice as many knee replacements

The need for prostheses increases along with the kilos, a recent Northern Ireland study shows. "Compared to the Northern Irish population, obese men face double the risk of eventually needing an artificial knee joint. With obese women, the risk is even 2.4 times as high. Effective programs for preventing obesity are needed to respond to these alarming figures in order to dampen the enormous demand for arthroplasty and the resulting drastic costs to the healthcare system," said Dr Christopher O'Neill (Musgrave Park Hospital, Belfast). The body mass index (BMI) of 1,000 persons needing total knee replacement was measured for the study. More than 90 percent of study participants were overweight or obese, whereas 59 percent of Northern Ireland's general population

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are so evaluated. Among the study participants, 28.5 percent had a BMI of 25.0 - 29.9 kg/m² (overweight) and nearly 62 percent were obese (BMI > 30.0 kg/m²). Women on average were in worse shape than men.

New surgical technique for obese patients

In the future, orthopaedic surgeons should apply customised patient specific guides for adapting knee prostheses in obese patients, adjusting the size of components, axis position and rotation according to usual surgical principles, Australian surgeon Prof Warwick Bruce and British surgeon Dr Rahij Anwar recommended at the EFORT Congress. "Patient specific guides are a great technological improvement compared to conventional methods of total knee arthroplasty. They increase precision, reduce blood loss and surgical time and also help to properly measure the size of implants in patients with a large BMI. Additionally, the mechanical axis can be reliably restored using patient-specific guides," Dr Anwar said. They have tested the new method in Sydney with an international research team in 47 cases. Performing total knee replacement in obese people is tricky. Anatomic assessment clearly becomes more difficult and the large soft-tissue volume may impede the proper application of standard guides. In some circumstances, this could lead to an abnormal mechanical axis position. Greater bleeding or longer surgery duration can occur within this patient group.

About EFORT

The European Federation of National Associations of Orthopaedics and Traumatology (EFORT) is the umbrella organisation linking Europe's national orthopaedic societies. EFORT was founded in 1991 in the Italian Marentino. Today it has 45 national member societies from 42 member countries and eleven associate scientific members.

EFORT is a non-profit organisation. The participating societies aim at promoting the exchange of scientific knowledge and experience in the prevention and treatment of diseases and injuries of the musculoskeletal system. EFORT organises an annual congress, seminars, courses, forums and conferences within Europe. It also initiates and supports basic and clinical research.

Sources:

EFORT Abstract Goudie et al.: Are They Getting Fatter? Changing Trends In Total Knee Arthroplasty; EFORT Abstract O'Neill et al.: The Effect Of BMI On Requirements For TKA Within The Northern Ireland Population; EFORT Abstract Zingg et al.: Influence Of Obesity On Revision And Infection Rates After Primary Total Knee Arthroplasty; EFORT Abstract Anwar et al.: Total Knee Arthroplasty Using Patient Specific Guides In Patients With A Body Mass Index Of 35 And Above: Our Experience In 47 Knees.