14th EFORT Congress 2013

5-8 June

www.efort.org/istanbul2013

EFORT 2013: 7,500 orthopaedic specialists gather in Istanbul

New study recommends autologous blood donations prior to knee and hip replacement for selected patients only

Speaking at the EFORT Congress, experts urged that autologous blood donations prior to a knee implants be reserved for anaemic patients only. A new study shows that this approach can save valuable resources.

Istanbul, 8 June 2013 – "Patients not suffering from anaemia before an operation do not need autologous blood donations prior to a primary knee or hip implantation. This routine measure has not been medically indicated for a long time in all cases and often only leads to an increased transfusion rate. At the same time, many autologous blood donations are disposed of after the operation because they are not needed. Instead, we should concentrate on blood management for patients whose preoperative haemoglobin level is too low." Prof Friedrich Böttner (Hospital for Special Surgery in New York City, USA) made this point today speaking at the 14th Congress of the European European Federation of National Associations of Orthopaedics and Traumatology (EFORT) in Istanbul. 7,500 experts gather there to discuss the latest developments in their field. This recommendation by Prof Böttner breaks with a wide-spread practice of keeping at least one bottle of autologous blood available for safety's sake during the course of every hip and knee replacement procedure. Preoperative autologous blood donation is an established treatment standard aimed at minimising the risks associated with transfusions of allogeneic blood donations. As the new study conducted by Prof Böttner's research team shows, this is not the only possible approach.

Prof Böttner: "In our prospective study, we investigated the extent to which targeted use of banked blood affected the overall transfusion rate. For example, how frequently do non-anaemic patients actually need allogeneic blood transfusions if they do not provide a supply of their own blood? And by contrast, how many bottles of blood do patients with a preoperative haemoglobin level of less than 13.5g/dL need?" To this end, the New York research team analysed data from more than 429 primary knee prosthesis implants between 2009 and 2012. Only anaemic patients were advised to donate their own blood. Nearly half of them (98 out of 233) followed this advice. The majority of the non-anaemic group, 185 patients, did not donate their own blood.

Hardly any banked blood needed for non-anaemic patients

Only 13 of the 185 non-anaemic patients (5.9%) actually needed an allogeneic blood transfusion during or after the procedure. Significantly more of the anaemic subjects in the study did. 33% of the patients from the anaemic group who had not donated blood needed at least one blood bottle donated by another person, in other words 44 out of 135 patients. The anaemic group (98 patients) which had donated their own blood actually needed this blood in 71% of the cases. Autologous blood donation proved highly effective for anaemic patients and reduced the allogeneic blood required to 9%. Our findings are in accord with those in other research projects. It is obvious that one can dispense with routine autologous blood donations prior to primary knee and also hip replacement procedures. However,

info 14th EFORT media&press 2013; press@efort.org; +41 78 8712680,
Dr. Birgit Kofler, B&K Kommunikationsberatung; E-Mail: kofler@bkkommunikation.com;
Mobile: +43 676 6368930; Ph. Vienna: +43 1 3194378 13; Ph. Berlin: +49 30 700159676

targeted use of banked autologous blood is reasonable for both interventions only if patients suffer from anaemia and therefore have an increased transfusion risk. Patients can spare themselves autologous blood donations if they have a preoperative haemoglobin level exceeding 12.5 g/dL prior to hip replacement and exceeding 13.5 g/dL prior to knee replacement."

Targeted use of banked blood

These blood markers could easily be entered as orientation in the clinical treatment protocol of each institution. Prof Böttner emphasised that the targeted use of expensive banked blood would also greatly relieve the burden on blood banks and health care budgets.

It is urgent that the use of resources be carefully considered not least because of the sharp rise in demand for knee prostheses. An increasing number of people need an artificial knee joint due to demographic trends. According to an OECD report, the number of knee implantations between 2000 and 2010 tripled in Denmark, more than doubled in Spain and rose by 60% in France. Although there are major local differences when it comes to implantations, the average determined for the EU-21 speaks volumes. In 2005, knee prostheses numbered 89 per 100,000 inhabitants and year. Five years later that figure had already topped 109.

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 42 national member societies from 43 member countries and six 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 European congresses, seminars, courses, forums and conferences. It also initiates and supports basic and clinical research.

Sources: EFORT Abstract 3714: Targeted preoperative autologous blood donation in total knee arthroplasty: The Hospital for Special Surgery Blood Preservation Centre experience; Eurostat Database: *http://dx.doi.org/10.1787/888932704627;* OECD (2012): „Health at a Glance", OECD Publishing http://www.oecd-ilibrary.org/docserver/download/8112121ec037.pdf?expires=1367064994&id=id&accname=guest&checksum=576F319F323CD54D470676CAEDA8C769; The Orthopaedic Surgery Transfusion Hemoglobin European Overview (OSTHEO), 2004

info 14th EFORT media&press 2013; press@efort.org; +41 78 8712680,
Dr. Birgit Kofler, B&K Kommunikationsberatung; E-Mail: kofler@bkkommunikation.com;
Mobile: +43 676 6368930; Ph. Vienna: +43 1 3194378 13; Ph. Berlin: +49 30 700159676