or hip replacements

PAIN AND RESTORES MOBILITY SOONER

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to pain, do not need to be severed and muscles groups that are important for hip function need not be detached from the bone. Moreover, the surgeon works with a direct view and, unlike in some other surgical procedures, is not dependent on the X-ray machine screen and an image transformer.

Statistics appear to confirm the advantages of this new method: The patients can put pressure on the hip joint immediately after surgery and only need crutches for a few days. They do not suffer pain in the upper thigh muscles; most patients can climb stairs unaided just three days after surgery and the pelvis is stabilised within two days. Patients operated on with the previously common, minimally invasive procedures, where one lateral cut is made, were dependent on crutches for 4-6 weeks and the pelvis only stabilised after six weeks. A quarter of those patients still have problems.

As the results achieved in over 600 patients have been consistently successful, for some patients Professor Irving even replaces two hip joints simultaneously in one surgical procedure.

Report: Anja Behringer

EDICTION ATIENTS

RAISE HOPE OF AT HIGHEST RISK

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involved 231 elderly had sustained a low- ure of the hip, spine, rearm during a two-year 448 randomly selected n who had not sustained ring the same two-year ed on measurements

he said. 'The use of HSA should result in more definitive measures of bone health.'

Dr Beck and colleagues in JHU's School of Medicine are widely recognised for their work in the development of biomechanical parameters of hip structure derived from densitometric information.

company's software builds upon technology developed by APL, which it recently acquired. 'DXA systems have advanced well beyond bone mineral density measurements,' said Brad Herrington, Hologic Vice President of Skeletal Health Imaging. 'Clinicians have long sought the

used in bone research, during which it might help in understanding how the femur weakens with age and how pharmaceutical treatments work to reduce hip fracture risk.

HSA is a trademark of The Johns Hopkins University Applied Physics Laboratory.

Hip revision with bone grafting using inorganic bone mineral matrix

By **Dr Michael Wagner**, head physician at the Bethanien Orthopaedic Clinic, Chemnitz, Germany

The new European Transplantation Regulation makes it very difficult, or even impossible, to run a bone bank from 2007 onwards. In most revision procedures a reconstruction of bone defects is mandatory. Femoral heads harvested from sound donors during total joint replacement have been used worldwide for decades. Since this well-established procedure may be no longer applicable in the future other proven materials are necessary to fill bone defects.

From February to July 2006, at the Orthopaedic and Trauma Department, in Chemnitz, a series of 15 acetabular revisions with major bone defects was conducted, using inorganic bone mineral matrix of bovine origin.1 This mineralised bone matrix is chemically comparable with mineralised human bone. Many earlier animal experimental studies had proved the excellent osteoconductivity.

The average age of the surgical patients was 75 (56 – 84 years). No additional bone grafts where used, no structural allografts were necessary to reconstruct the bone defects in the pelvis.

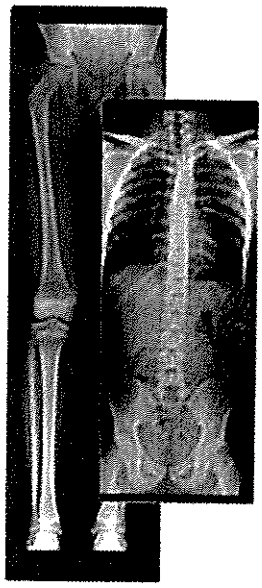
The defects were filled with bone matrix; antiprotrusio cages and acetabular reconstruction rings were used as acetabular prosthetic components.

The postoperative course was uneventful in all 15 cases. No revision was necessary, no infection occurred. In the short-term follow-up, the clinical and radiological examinations showed no changes; there was no resorption of the commercially available bone graft. No implant migration could be defected.

The inorganic bone mineral matrix, of bovine origin, seems to be a good substitute for human bone in total hip revision surgery. It is suitable to fill even major defects, but it is no substitute for structural allografts. The short-term results, in mainly cavitary defects, are promising; the use of this material does not need any difficult preparation because it can be stored on the shelf without needing refrigeration.

1 Orthoss manufacturer: Geistlich Pharma AG, Bahnhofstrasse 40, CH-6110 Wolhusen

Exclusive dry long film for digital CR/DR



XL, an exclusive, dry, long film for use in the *Horizon XL printer* - currently the only digital long film imager on the market – promises to not only to reduce costs, save space, and completely eliminate wet film processing needs, but also to enhance orthopaedic studies of paediatric and adult spines, scoliosis and long bone hip-to-ankle.

Launched by Codonics, the Ohio-based manufacturer of dry diagnostic medical imagers, the long film comes in two sizes: 14"x36" and 14"x51", enabling 'true size' images to be printed on one continuous film (and to be folded to 14"x17").

'The XL offers true-size imaging up to 51" in length, so that an X-ray is exactly what is printed on a single piece of film, ensuring a surgeon's measurements during templating. Yet, Horizon takes up just two feet of counter space and weighs only 66 pounds (29.94 kilograms),' the manufacturer explained. 'Traditional, wet long film capabilities are completely eliminated as the market transitions from analogue to digital,' said Hank Adams MD. 'Codonics provides the only means of printing long film in the digital age of CR/DR.'

Horizon's multiple media printing capabilities bring alternative solutions to printing not only long film, but also large format film and several other film sizes, as well as edge-to-edge colour paper and greyscale paper. 'It's the perfect imaging solution, using Codonics film for true-size, DirectVista Paper for surgical planning, referral copy and patient medical files and for its colour capability for arthroscopy applications plus 3D colour CT,' the firm added.

The XL received FDA approval in March. It is currently in 'Beta testing' at the Mayo Clinic and HSS Hospital, New York.