Intraoperative Imaging with Cios Fusion

Clinical Cases

Hospital Nuremberg South, Germany
Clinical Case

Femur shaft fracture
Patient history and preoperative findings

Preoperative X-ray

Diagnosis: 40° increased external rotation and shortening of the femur after nail fixation of an open fracture of the femoral shaft with a distal femoral nail

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Group</td>
<td>19 - 30</td>
</tr>
<tr>
<td>Remarks</td>
<td>Violent pain of the upper leg, patient ASA 1*; Patient had an accident two months before</td>
</tr>
</tbody>
</table>
Surgical procedure

Insertion of lag screw

After extraction of the nail and fracture reduction a lag screw was inserted to hold the correct repositioning.
Anatomical reduction of the fracture and the correct position of the plate are verified by X-ray.
Surgical procedure
Control of results – lateral view

Anatomical reduction of the fracture and the correct position of the plate are verified by X-ray

Proximal femur

Distal femur

Courtesy: Hospital Nuremberg South, Germany
Cios Fusion
System overview

160% more image coverage** and crystal-clear visualization of anatomical details thanks to full view Flat Detector technology

Automatic optimization of dose, brightness and contrast thanks to IDEAL (Intelligent Dose Efficiency Algorithm)

Operation of the system directly at table-side from within the sterile field with remote user interface*

Completely flexible system control with a large preview image and intuitive operability thanks to touch user interface

Fully integrated workflow support, with features such as unique Live Graphical Overlay*, SmartView*, and injection trigger* with clinical versatility

Easy maneuvering and positioning of the system and excellent patient access thanks to compact and lightweight design

*Option
**Compared to today’s conventional 23 cm / 9 inch image intensifiers
Clinical Case

Proximal tibia fracture
CT image

Diagnosis: 3° open proximal tibia fracture on the right leg

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Group</td>
<td>31 - 45</td>
</tr>
<tr>
<td>Remarks</td>
<td>Violent pain of the upper leg, patient ASA*1; Patient had an accident two months before</td>
</tr>
</tbody>
</table>

* American Society of Anesthesiologists ASA physical status – ASA1 means normal and healthy patient

Courtesy: Hospital Nuremberg South, Germany
Surgical procedure
Fracture reduction and insertion of lag screws

Removal of the external fixator, anatomical fracture reduction was ensured with a reduction clamp

Insertion of the first lag screw

Courtesy: Hospital Nuremberg South, Germany
Surgical procedure
Fixation of compression plate

Shaping of the locking compression plate to the bone

Insertion of cortical and locking screws

Courtesy: Hospital Nuremberg South, Germany
Surgical procedure
Control of results – anterior view

Proximal tibia
Distal tibia

Anatomical reduction of the fracture and the correct position of the plate are verified by X-ray

Courtesy: Hospital Nuremberg South, Germany
Surgical procedure
Control of results – anterior view

Anatomical reduction of the fracture and the correct position of the plate are verified by X-ray

Proximal tibia  Tibia shaft  Distal tibia
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Clinical Case

Comminuted radial head fracture
Patient history and preoperative findings

Preoperative X-ray

Radial head fracture type 3* (Regan & Morrey Classification)

<table>
<thead>
<tr>
<th>Gender</th>
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</tr>
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<tbody>
<tr>
<td>Age Group</td>
<td>46 - 60</td>
</tr>
<tr>
<td>Remarks</td>
<td>Patient fell on his right elbow from a height of 1.5 m</td>
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</tbody>
</table>
Surgical procedure
Resection and trial prosthesis

Evaluation of trial prosthesis in flexion

Evaluation of trial prosthesis in extension

Courtesy: Hospital Nuremberg South, Germany
Surgical procedure
Control of correct placement

Correct placement and length of the prosthesis in extension verified by X-ray
Radial collateral ligament fixed with an anchor

Radius head in flexion

Radius head in extension

Courtesy: Hospital Nuremberg South, Germany
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Thank you for your enthusiasm!

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