Combined use of Ziehm Vision RFD 3D and Ziehm Vision FD Vario 3D

Increasing surgical confidence with intraoperative 3D information in a Type II odontoid fracture

As a result of a ground-level fall on his head, a 67-year-old male patient suffered a dislocated odontoid fracture Type II (Fig. 1) without neurological deficits but with severe pain in the upper cervical spine. The patient was obese, with a body mass index of 30.
The indication for an anterior lag screw stabilization of the odontoid fracture was determined and performed with the use of Ziehm Vision FD Vario 3D and Ziehm Vision RFD 3D in parallel use. The operation time was 67 minutes. Two cannulated screws were placed from the anterior using the Smith-Robinson approach after inserting K-wires under fluoroscopic control. After the screws were placed, an intraoperative 3D scan was performed. The reduction of the fracture and correct screw placement could be viewed clearly (see Fig. 2 and 3). A correction of the screws was not necessary.
The usage of 3D imaging, especially with Ziehm Vision RFD 3D, during this surgery demonstrated these advantages:

- Intraoperative control of the screws and reduction of the fracture in an image with CT-scan-like quality within a short application time
- Elimination of the need for a postoperative CT scan
- Easy handling of the Ziehm Imaging C-arm devices

Authors:
Prof. Dr. Christoph Josten
Dr. Jan-Sven Jarvers

Department of Orthopaedic, Trauma and Plastic Surgery
University of Leipzig