

Section: Mechatronik

ID: 40

Abstract-Title:

PRELIMINARY CLINICAL RESULTS WITH THE MRI -COMPATIBLE GUIDING SYSTEM INNO MOTION

Authors:

M. rasmus¹, S. Dziergwa¹, T. Haas¹, P. Madoerin¹, R. Huegli¹, D. Bilecen¹, A.L. Jacob¹

¹ IfR University Hospital Basel

Abstract-Text:

Purpose:

Descriptions and preclinical results of the MRI compatible assistant manipulator system InnoMotion by Innomedic have been published (e.g. Wendt et al. CURAC 2004, Melzer et al. RSNA 2006). In June 2006 the guidance system was installed at the University Hospital of Basel for clinical usage with an open bore MRI scanner (Magnetom Espree, Siemens medical solutions).

Method:

Since June 2006 the first patients underwent MRI guided punctures assisted by the new system. All punctures are pure clinical indications. Data is analyzed retrospectively in accordance to indication, target-localization, duration of intervention (in-room-time), number of necessary correction steps and angle of canula (α = angle of canula to virtual plumb line in x/y plane, β = angle of canula to virtual plumb line in z direction). Indications / targets consist of spinal nerve root infiltrations, facet joint infiltrations, ileo-sacral-joint infiltrations and others.

Results:

Most of the assisted punctures were successful; in (at least) one case a conversion to manual infiltration under MR guidance was necessary, due to an emergency stop of the device (probably because of mechanical irritation by sterile coverage).

Actual Results until end of September 2006 will be presented at CURAC 2006.

Discussion:

The first clinical experiences and results are encouraging. The system proofed to be feasible for clinically indicated punctures.

We think that with growing experience the field of indications might be widened to more complex interventions. More experiences with through-plane-punctures are needed to take the advantage of the systems performance. Besides the in-room-time might be reduced with increasing experience.

Further studies are needed to evaluate the whole range of possibilities provided by the new system on the one hand and, on the other to value the cost/performance ratio in accordance to clinical demands.

Bild 1/JPG

