Section: **Ultraschall und Intervention**

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Abstract-Title:
BEDSIDE SONO-CT: REDUCTION OF CT/MR EXAMINATIONS BY HIGHEND-NEUROSONOGRAPHY

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Abstract-Text:
Objective:
High-end ultrasound technique may provide new options for neurosurgery. To critically determine indication for CT/MR examinations, especially in the ICU, it has been studied in a primary series, what can be done by actual sonography equipment. Can CT/MR examinations be reduced or partially substituted with the advantage to bringing the technique to the patient and diminish logistic problems and costs in future?
Methods:
In a series of 1022 consecutive high-end ultrasound investigations there were 584 examinations at ICU of which 92 cases done with the aim that CT or MR examinations might not be necessary thereafter. The ALOKA 5000 equipment was brought to the patient at bedside. A trans-cranial sono-probe 5 – 7.5 MHZ was used in cases with a bone defect of at least 2 x2 cm.
Results:
The sonography images showed an excellent slice-anatomy comparable to that of CT and MR. In this small series CT or MR examinations could be substituted by sonography, at least the indication for CT/MR could be determined more precisely and diminished in number. Moreover the logistic problems of CT/MR for ICU patients were reduced. Patients with edema and with critical ICP conditions could be monitored by “bedside sono-CT” with less danger. Additionally the monitoring of physiological and patho-physiological parameters was always done in the same examination, presenting sonography superior to CT and MR in this selected group of patients.
Conclusion:
For reduction of logistic- and financial problems as well as stress for critical care patients it should be considered to monitoring them by high-end sonography imaging at bedside reducing CT/MR examinations. We bring the equipment to the patient and repeat the examination any time. Quality of imaging is comparable to CT/MR and physiological parameters can be monitored in the same investigation.

Bild 1/JPG

Bild 2/JPG