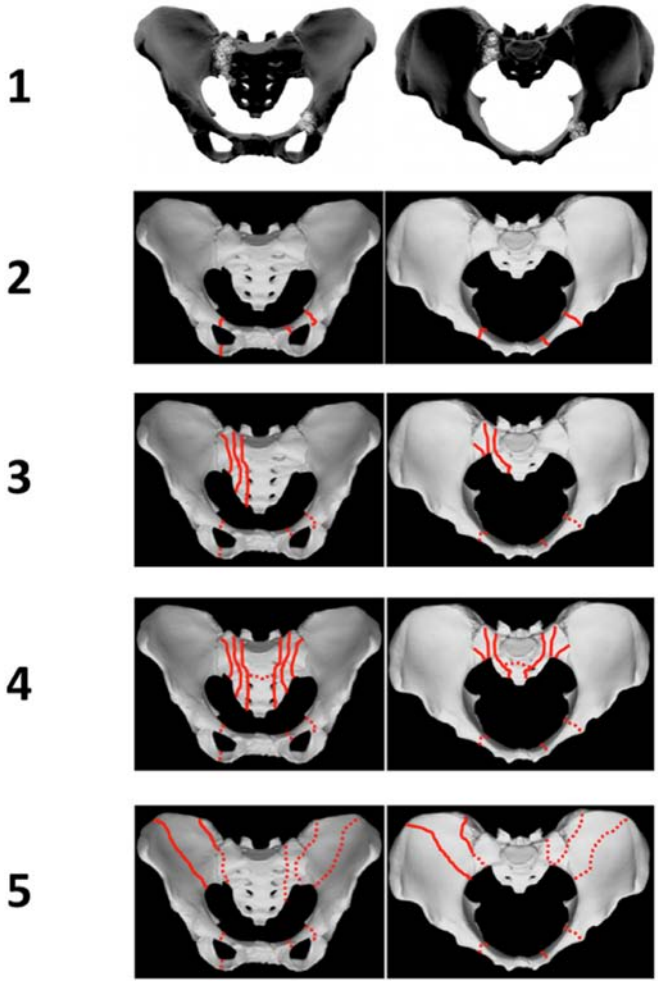
intra rater reliability (intraRR) was calculated using Kendalls Tau (t) for classification and Cohens Kappa (kC) for the presence of at least one modifier. All 28 raters were experienced orthopedic surgeons. Fifteen raters have been involved in the development process (developing rater, DR) and 13 worked with the score the first time (user rater (UR).

Results: In both surveys the interRR for categories were substantial kF=0,764 (1. Survey) und kF=0,790 (2. Survey). The interRR of DR and UR were nearly on a par (kF 1. Survey/2. Survey: DR 0,776/0,813; UR 0,748/0,766). The agreement for each category was also substantial (kF min./max. 1. Survey/2. Survey: 0,708 - 0,827/0,747 - 0,852). The existence of at least one modifier was rated with substantial agreement (kF 1. Survey/2. Survey: 0,646/0,629).

The IntraRR showed almost perfect agreement mit t=0,894 (DR: t=0,901, UR: t=0,889). The modifier had an intraRR of kC=0,684 (Senior-Rater: kC=0,758, Junior-Rater: kC =0,621) which is also considered to be substantial.

Conclusions: The OF Pelvis resulting from a consensus process is showing a substantial interRR and an almost perfect intraRR following Landis und Koch. The similar promising reliabilities between the DR and UR rater group proof that this classification can be used independently of the training status of the user. It may be a valid fundament for an indication for treatment score.



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THE INFLUENCE OF SURGEON EXPERIENCE AND SUBSPECIALITY ON THE RELIABILITY OF THE AO SPINE SACRAL CLASSIFICATION SYSTEM

Brian Karamian [1], Gregory Schroeder [1], Jose Canseco [1], Lorin Benneker [2], Frank Kandziora [3], Shanmuganathan Rajasekaran [4], Cumhur Öner [5], Klaus Schnake [6,7], Christopher Kepler [1], Alexander Vaccaro [1]. [1] *Rothman Orthopaedic Institute at Thomas Jefferson University, Philadelphia, PA, USA;* [2] *Spine Service, Orthopaedic Department, Sonnenhofspital, Bern, Switzerland;* [3] *Center for Spine Surgery and Neurotraumatology, BG Unfallklinik Frankfurt am Main, Frankfurt, Germany;* [4] *Department of Orthopaedics, Trauma and Spine Surgery, Ganga Hospital, Coimbatore, India;* [5] *University Medical Center, Utrecht, the Netherlands;* [6] *Center for Spinal Surgery, Malteser Waldkrankenhaus St. Marien, Erlangen, Germany;* [7] *Department of Orthopedics and Traumatology, Paracelsus Private Medical University Nuremberg, Nuremberg, Germany*

Study Design: Cross-sectional survey

Objective: To determine the influence of surgeons' level of experience and subspeciality training on the reliability, reproducibility, and accuracy of sacral fracture classification using the AO Spine Sacral Injury Classification System.

Summary of Background Data: An ideal classification system is easily comprehensible and reliable amongst the diverse group of surgeons. A surgeons' level of experience may have a significant effect on the reliability and accuracy of a classification system. Moreover, surgeons of different subspecialities may have various levels of comfort with imaging assessment of sacral injuries required for accurate diagnosis and classification.

Methods: High-resolution computerized tomography (CT) images from 26 cases were assessed by 172 investigators from a diverse array of surgical subspecialities (general orthopaedics, neurosurgery, orthopaedic spine, orthopaedic trauma) and experience (<5, 5-10, 11-20, >20 years). Validation assessments were performed via web conference using high-resolution images, as well as axial/sagittal/coronal CT scan sequences. Two assessments were performed by each investigator independently three weeks apart in randomized order. Reliability and reproducibility were calculated with cohen's kappa coefficient (k) and gold standard classification agreement was determined for each fracture morphology and subtype and stratified by experience and subspeciality.

Results: Respondents achieved an overall k = 0.87 for morphology and k = 0.77 for subtype classification, representing excellent and substantial intraobserver reproducibility, respectively. Respondents from all four practice experience groups demonstrated excellent interobserver reliability when classifying overall morphology (k=0.842/0.850, Assessment 1/Assessment 2) and substantial interobserver reliability in overall subtype (k=0.719/0.751) in both assessments. General orthopaedists, neurosurgeons, and orthopaedic spine surgeons exhibited excellent interobserver reliability in overall morphology classification and substantial interobserver reliability in overall subtype classification. Surgeons in each experience category and subspecialty correctly classified fracture morphology in over 90% of cases and fracture subtype in over 80% of cases according to the gold standard. Correct overall classification of fracture morphology (Assessment 1: p= 0.024, Assessment 2: p=0.006) and subtype (p2<0.001) differed significantly with surgeons with >20 years of experience demonstrating increased difficulty correctly classifying all fracture subtypes overall in comparison to the other experience groups. Correct overall classification did not significantly differ by subspecialty.

Conclusions: Overall, the AO Spine Sacral Injury Classification System appears to be universally applicable among surgeons of various subspecialties and levels of experience with acceptable reliability, reproducibility, and accuracy.

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BLOOD PRESSURE MANAGEMENT IN TRAUMATIC SPINAL CORD INJURY: DOES MAP TARGETING IMPROVE NEUROLOGICAL OUTCOME?

David Rowland, Luke Geoghegan, Steve Ibe, Kevin Tsang. *Dept Of Neurosurgery, St Mary's Hospital, Imperial College Healthcare NHS Trust, London, UK*