Occipitocervical Complex (OCC) Injury Detection Software

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Technology description

The invention is a software module to detect injury to the occipitocervical complex (OCC). The software module identifies and computes the basion-dens interval (BDI). The BDI is the distance between the inferior tip of the basion and the superior tip of the dens ΓÇô two anatomical structures in the OCC. Measurement of the BDI aids in the diagnosis of OCC injury. If the BDI exceeds a certain value, then the risk of undetected OCC injury is elevated. The software computes the appropriate measurements, compares these measurements with normal values, and provides a report of the results to the physician. The purpose of the software is to aid physicians in the evaluation and assessment of OCC injury, which in turn could lead to life-saving patient interventions.
Developed through a collaborative effort between Baylor Scott & White Healthcare and Baylor University is breakthrough software for the detection of ligamentous injuries in the occipitocervical complex (OCC). Ligamentous injuries in the OCC are difficult to detect and if untreated can result in paralysis or death. This software measures the basion-dens interval (BDI), the distance between the base of the skull and the second cervical vertebra, on spine CT scans. If the BDI exceeds normal values an OCC injury may be present. Abnormalities detected generate an alert that prompts a physician to more closely examine the OCC. Currently, there is no other software available to aid in the detection of OCC injuries.

Application area

Software to aid physicians in the inspection of the occipitocervical complex in spine CT scans.

Advantages

- This software module offers precise and accurate results not attainable by the naked eye - There is no competing product available on the market

Institution

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