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Characterisation and objective monitoring of balance disorders following head trauma, using videonystagmography.

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Abstract

Objective: To characterise balance disorders occurring after head trauma, using videonystagmography, and to test the efficiency of videonystagmography as a diagnostic and monitoring tool.

Method: Prospective, cohort analysis of 126 head trauma patients managed with vestibular evaluation, monitoring and treatment, in a tertiary referral centre. Analytical parameters included: head injury severity; balance disorder type, severity and time of onset; and patient recovery and outcome. **Results:** Head trauma was minor in 31.7 per cent, mild in 36.6 per cent, moderate in 19 per cent and severe in 12.7 per cent. Balance disorder symptoms included vertigo in 42.9 per cent, unsteadiness in 15.9 per cent, dizziness in 9.5 per cent and none in 31.7 per cent. Videonystagmographic balance disorder diagnosis type was peripheral vestibular in 23.8 per cent, central in 7.9 per cent, mixed in 12.7 per cent, benign paroxysmal positional vertigo in 4.8 per cent and no findings in 50.8 per cent. Balance disorder was immediate in 47.6 per cent (this included all moderate and severe trauma cases). Benign paroxysmal positional vertigo developed within the first week in two-thirds of cases. More severe trauma cases had longer recovery times. Peripheral, mixed and central balance disorders recovered within the first three months. Early rehabilitation of acute balance disorders led to early recovery regardless of diagnosis. **Conclusion:** Videonystagmography enables precise, simple, cost-effective monitoring of balance disorders after head trauma, and improves care and outcomes.