

## **Clinical and ocular motor analysis of congenital nystagmus in infancy.**

[Hertle RW<sup>1</sup>](#), [Dell'Osso LF](#).

### **Author information**

### **Abstract**

#### **PURPOSE:**

The purpose of this study was to identify the clinical and ocular motility characteristics of congenital nystagmus and to establish the range of waveforms present in infancy.

#### **BACKGROUND:**

The clinical condition of congenital nystagmus usually begins in infancy and may or may not be associated with visual sensory system abnormalities. Little is known about its specific waveforms in infancy or their relationship to the developing visual system.

#### **METHODS:**

Forty-three infants with involuntary ocular oscillations typical of congenital nystagmus were included in this analysis. They were evaluated both clinically and with motility recordings. Eye movement analysis was performed off line from both chart recordings and computer analysis of digitized data. Variables analyzed included age, sex, vision, ocular abnormalities, head position, null-zone or neutral-zone characteristics, symmetry, conjugacy, waveforms, frequencies, foveation times, and responses to convergence and to monocular cover.

#### **RESULTS:**

Patient ages ranged from 3 to 18 months (average, 9.2 months). Seventeen patients (40%) had abnormal vision, 3 had a positive family history of nystagmus, 11 had strabismus, 16 (37%) had a head posture, 26 (60%) had null and neutral positions, 14 (33%) had binocular asymmetry, and all were horizontally conjugate. Average binocular frequency was 2.8 Hz, and average monocular frequency was 4.6 Hz. The waveforms were both jerk and pendular; average foveation periods in patients with normal vision were more than twice as long as those in patients with abnormal vision.

#### **CONCLUSIONS:**

Common clinical characteristics and eye-movement waveforms of congenital nystagmus begin in infancy, and waveform analysis at this time helps with both diagnosis and visual status.