

Diagnostic priorities

Clinical recommendations following identification of a pathogenic CASK variant. Based on the collective clinical experience of the CASK Research Foundation and with support from the GenROC team at University of Bristol, the following baseline investigations and ongoing considerations are recommended for children following confirmation of a pathogenic or likely pathogenic variant in the CASK gene.

Baseline diagnostic investigations

As a minimum, the following specialist assessments are recommended at, or shortly after, diagnosis:

- Audiological evaluation — to assess for hearing impairment.
- Ophthalmological assessment — to evaluate visual function and structural anomalies.
- Neurological review — including developmental assessment and surveillance for seizure activity.
- Physiotherapy assessment — to evaluate gross motor function, tone, posture, and mobility needs.

Anticipated multidisciplinary input

In addition to the above, many children are likely to require ongoing multidisciplinary support, including:

- **Occupational therapy** — to support fine motor skills, adaptive functioning, and sensory integration. Coordination issues are extremely common.
- **Speech and language therapy** — for communication needs and management of feeding and swallowing difficulties.
- **Social care needs assessment** — reassessments should be undertaken as needs change.

Clinical surveillance and management considerations

Paediatricians and relevant specialists should be aware of the following commonly reported features in children with CASK-related disorders.

1. **Growth patterns.** Growth may be atypical, including reduced weight and stature. Clinical focus should prioritise overall health and nutritional adequacy rather than strict adherence to standard growth centiles.
2. **Gastro-oesophageal reflux.** Reflux may present as pain or distress.
3. **Constipation.** A common issue, even if stools appear soft.
4. **Sleep disturbance.** Sleep difficulties may develop and may warrant medicating.
5. **Spinal monitoring.** Surveillance for scoliosis is advised, with referral to orthopaedic services as clinically indicated.
6. **Feeding difficulties.** Feeding challenges are common; involvement from a dietician may be required to optimise nutritional status and growth.
7. **Epilepsy risk.** Increased risk of epilepsy. Infantile spasms are among the most commonly reported seizure types and, notably, may present beyond the first year of life. Ongoing neurological surveillance is therefore recommended.
8. **Sensory processing differences.** Where behavioural concerns arise, assessment for sensory processing differences is advised. Both sensory-seeking behaviours and sensory aversions have been observed and may contribute to distress or functional impairment.