

The Incidence, Clinical Phenotype and Management of Clinically Significant Structural Hypotony in the United Kingdom

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Background

Clinically significant structural hypotony can be categorised as surgically or non-surgically induced. The time at which hypotony becomes clinically significant depends on its cause. To ensure comprehensive case capture, this study will include cases of persistent hypotony lasting between 3 and 12 months at the time of reporting, since hypotony persisting beyond three months is more likely associated with irreversible causes such as ciliary body atrophy or cyclitic membranes.

This study aims to determine the incidence, clinical features, and management of clinically significant hypotony in the UK. Findings from this study will provide valuable data to support future research including treatment trials whilst also informing a national diagnostic and referral framework, enabling earlier detection and broader access to specialist care.

Statement of research questions

1. What is the incidence of clinically significant structural hypotony in the UK?
2. Is there a clinical phenotype associated with development of clinically significant hypotony?
3. What is the pattern of clinical presentation, and what are the most common pathologies linked with clinically significant hypotony?
4. What investigations were performed to aid diagnosis?
5. What were the clinical and visual outcomes?

Case definition

Persistent hypotony as evidenced by

1. IOP ≤ 6.5 mmHg for 3-12 months AND visual loss only explained by hypotony

PLUS at least one of [structural changes

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| 2. Hypotony maculopathy (chorioretinal folds and/or vascular tortuosity) | 8. Hypotony keratopathy (corneal oedema; including Descemet's folds, increased corneal thickness, or bullous keratopathy) |
| 3. Choroidal detachment | 9. Loss of axial length, or hyperopic shift in refraction |
| 4. Retinal detachment | 10. New astigmatism |
| 5. Chronic optic disc oedema | 11. Shallow or flat AC |
| 6. Cystoid macular oedema | 12. New cataract |
| 7. Chronic choroidal effusion | |

Exclusion criteria

1. IOP ≤ 6.5 mmHg for <3 months
2. Glaucoma filtration surgery <6 months previously
3. Boston Keratoprosthesis (KPro); as unable to obtain accurate IOP measurements
4. Digital pressure as the only method of measuring IOP