A Three-County Audit of Exogenous Endophthalmitis Rates in the Peninsula Region

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Aims

To assess regional rates of endophthalmitis against the national standard in NHS, ISTC and private providers in Cornwall, Devon and Somerset in 2023.

Introduction

Exogenous endophthalmitis is a rare but serious complication of intraocular procedures, often resulting in poor visual outcomes. UK incidence rates are estimated at 0.022% for cataract surgery and 0.025% for intravitreal injections.

Recently, the number of cataract providers in the region has grown, yet data on post-operative complications like endophthalmitis remain largely unpublished. While intraoperative complication rates are tracked nationally in the NOD, post-operative events are harder to monitor. The unique geography of the Peninsula—bounded by sea—means follow-up care often occurs locally, even when surgery was performed elsewhere, increasing the likelihood of capturing transferred cases in this audit.

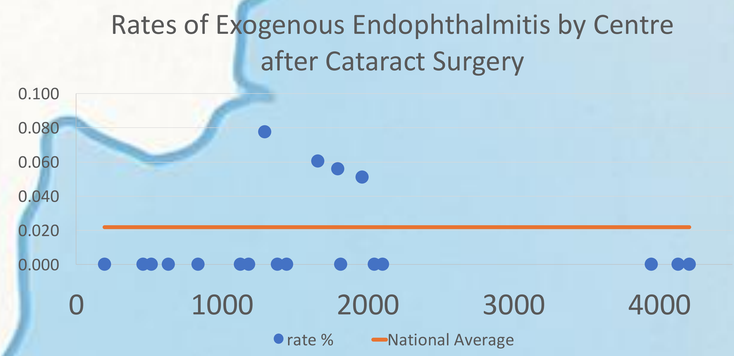
Methods

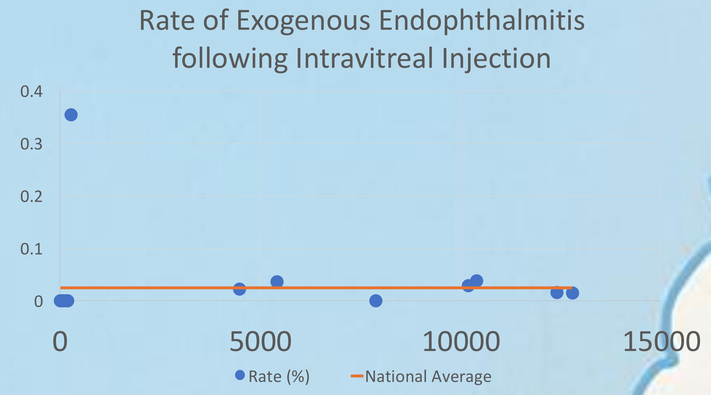
Retrospective data from 19 units; 7 NHS trusts, 3 ISTC and 9 private providers in the Peninsula region from the calendar year of 2023, including number of cataract operations and intravitreal injections and number of cases of exogenous endophthalmitis.

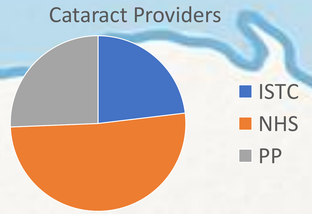
In order to ensure capture of as many cases as possible, details of vitreous biopsies were requested from the microbiology laboratory databases in the region, 3 of 7 centres were able to provide.

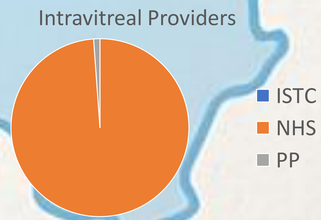
Results

- Data received from all 19 centres in the region who provide cataract surgery
- In 2023:
  - 32,680 cataract operations performed
  - 64,263 intravitreal injections administered
- Reported cases of endophthalmitis:
  - 4 following cataract surgery
  - 15 following intravitreal injection
  - 5 cases managed by the NHS but originating from non-NHS providers
- Incidence rates:
  - Cataract surgery: **0.012%**
  - Intravitreal injections: **0.023%**
  - Cataract surgery (including additional cases): **0.018%**
  - Intravitreal Injections: **0.025%**





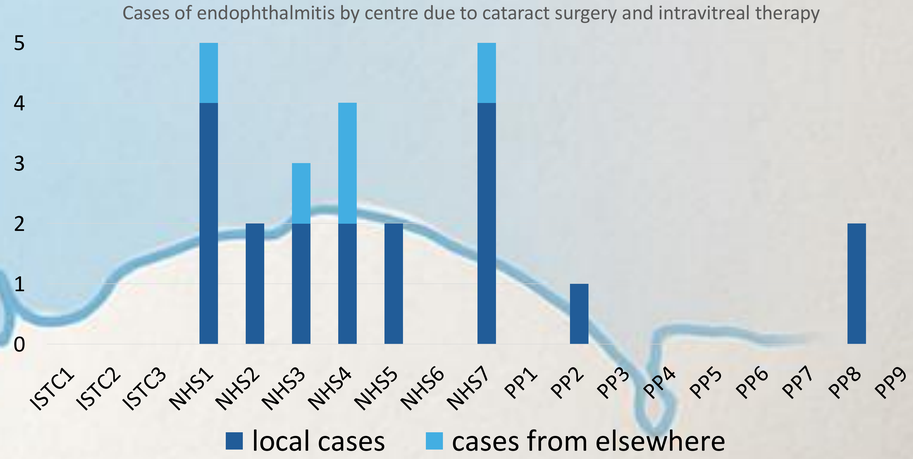




Patient	Cost (£)
1	6,593.80
2	7,207.27
3	2,512.93
4	6,254.51
5	1,805.49
Average	**4,874.80**

The Cost of Exogenous Endophthalmitis

The estimated cost of extra appointments, for a selection of patients with exogenous endophthalmitis from two centres in the Peninsula region. The costs varied significantly, reflecting the potential complexity of treatment required. For the five patients in this audit, the total costs ranged from £1,805.49 to £7,207.27, with an average cost of £4,874.80 per patient. These expenses cover a range of treatments and follow-up appointments, including imaging, from the initial diagnosis through to discharge.



Discussion

The incidence of exogenous endophthalmitis following cataract surgery in the Peninsula (0.012%) is below the national average (0.022%). However, including previously 'unclaimed' cases raises the rate to 0.018%, indicating possible underreporting.

Each case costs the NHS around £5,000. In 2023, five transferred cases amounted to an estimated £25,000, placing further pressure on already stretched ophthalmology services.

These cases not only carry clinical consequences but also represent avoidable costs, emphasising the need for better reporting systems and preventative strategies