

The increased use of surgical adjuncts in complex cataract surgeries undertaken in the COVID-19 pandemic

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The authors explore whether more complicated cataract operations have been performed in the NHS since the start of the coronavirus pandemic.

Restrictions in availability of access to elective cataract surgery during the COVID-19 pandemic and subsequent case prioritisation based on poorer visual acuity has led to the clinical impression that less operations but more complex surgeries are being performed in the NHS. Complex cataract surgeries have a higher risk for intraoperative complications, and while appropriate use of adjuncts can reduce this risk, there are obvious implications for training [1-4]. We wished to identify the quantity of surgical adjuncts as a surrogate indicator for complex cataract surgeries undertaken before and during the COVID-19 pandemic at a tertiary referral university hospital (Gartnavel General Hospital, Glasgow, Scotland).

The procurement of trypan blue, iris retractors, 1.4% sodium hyaluronate viscoelastic, iris expansion rings and Viscoat (sodium hyaluronate 3% and chondroitin sulfate 4%) were used as a proxy to determine the frequency of complex cataract operations and compared between two six-month periods (pre-pandemic 'period 1' March-August 2019 and during pandemic 'period 2' March-August 2021). The rate and the cost differential of adjuncts (units) procured

per 100 operations was calculated and compared between the study periods.

Significantly less cataract operations were performed during period 2 (567 vs. 1254 cases), yet more adjuncts were procured (127 vs. 59 total units; chi square test $p < 0.00001$). The rate of total adjunct procurement per 100 operations was significantly higher in period 2 (22.37 vs. 4.70), with each adjunct procured more frequently (trypan blue 6.34 vs. 2.63; $p = 0.0001$; iris retractors 6.34 vs. 1.91; $p < 0.00001$; Viscoat 1.41 vs. 0.16; $p = 0.0008$). The total adjunct cost (£6150 vs. £3195) and adjunct cost per 100 operations (£932.27 vs. £254.78) were significantly greater.

This small study provides evidence that significantly more complex cataract operations are currently being undertaken within the pandemic restrictions. While planned adjunct use can mitigate some risk of complications in cataract cases of greater complexity, these findings partly demonstrate the increasing difficulty in identifying appropriate training cases within the tertiary hospital services during the pandemic [1-4]. Engagement with other ophthalmic centres who may operate on a less complex case mix may be required to fulfil training requirements going forward.

References

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