Diplopia after cataract surgery

Editor—We were interested to read Gomez-Arnau and colleagues’ article on anaesthesia-related diplopia after cataract surgery,\(^1\) and the correspondence by Lanigan and Hammond.\(^2\) Transient diplopia (and very occasionally persistent diplopia) is a recognized postoperative complication of local anaesthetic cataract surgery. The exact aetiology of muscle injury is unknown but could be attributable to direct muscle or nerve trauma, local anaesthetic myotoxicity, periocular haemorrhage, or a combination of these.\(^3\)

In our department, ~2800 local anaesthetic cataract operations are performed each year under retrobulbar, peribulbar, sub-Tenons’ or topical local anaesthesia. These are done with or without hyaluronidase and are administered by junior and senior members of the surgical and anaesthetic teams. From our experience over 10 years, not one case of persistent postoperative diplopia has been seen.

It is true to say that the non-occurrence of an adverse event in a surgical series does not mean it cannot happen.\(^4\) The probability of such adverse events during and after operations that have not yet occurred in a finite number of patients (\(n\)) can be estimated with Hanley’s simple formula. It states that if none of \(n\) patients showed the event with which one is concerned, one can be 95% confident that the chance of this event is, at most, 3 in \(n\) (i.e. 3/\(n\)). In other words, the upper 95% confidence limit of a 0/\(n\) rate is ~3/\(n\) (for \(n\geq 30\)).\(^5\) Therefore, the maximum risk of this complication in our patients would be 3/2800 (0.001%).

It seems, therefore, that the incidence of 0.25% reported by Gomez-Arnau and colleagues,\(^1\) and 0.64% reported by Lanigan and Hammond\(^6\) is unusually high, and not what would be expected after statistical analysis.

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6. Strouthidis NG, Sobha S, Lanigan LP, et al. Vertical diplopia following...

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