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Title: Cataract Surgery after diabetic vitrectomy

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Editor

I enjoyed reading the work of Ostri et al on long term follow up of patients with diabetic vitrectomy (Ostri et al. 2013). The findings on cataract surgery are interesting and I think some of my own data can add to the discussion regarding the requirement of cataract surgery. In particular the effect of age and gas tamponade use on the development of cataract in this group of patients. I keep a prospective surgical database of all of my cases and from 1999 to 2008 I performed diabetic vitrectomy on 222 eyes. Thirty of these were pseudophakic pre-operatively, 26 had combined phakovitrectomy and 2 were aphakic leaving 164 phakic diabetic vitrectomies performed mostly with 20g vitrectomy surgery at that time . The mean age was 52 years and 55% were male.

In these eyes SF6 gas was used in 38(23%), Silicone oil in 6(4%) and long acting gas in 4(3%). All cases where oil or long acting gas were used had cataract surgery within 6 months so were excluded them from further analysis.

Two year follow up was available on 132 of these phakic eyes (80%) and 5 year follow up on 90 (55%).

Overall 35% had had cataract surgery by 2 years and 54% by 5 years, similar to the findings of Ostri et al. However if the patients are divided by age and gas use the findings are interesting. Table 1 shows the number of patients who underwent cataract surgery divided by age bands and SF6 gas use.

Table 1: Cataract surgery requirement by age band and SF6 gas use.

		Total number of phakic eyes at time of vitrectomy surgery with follow up	Number of eyes where SF6 gas was used (%)	Total number of eyes who had had cataract surgery (%)	Total number of eyes with gas who had had cataract surgery (%)
2 year follow up n=132	Under 50 years old	67	16(24%)	12(18%)	5(31%)
	50 -60 years old	22	4(18%)	8(36%)	3(75%)
	Over 60 years old	43	10(23%)	26(60%)	9(90%)
5 year Follow up N=90	Under 50 years old	49	11(22%)	18(37%)	7(63%)
	50 -60 years old	15	3(20%)	8(53%)	3(100%)
	Over 60 years old	26	6(23%)	23(88%)	6(100%)

The actual figures in any one unit will depend on the presence of any degree of cataract pre operatively and the threshold for cataract surgery as discussed in the paper by Ostri et al. but it can be seen that increasing age substantially increases the risk of cataract surgery being required as does short acting gas use. In patients over 60 years most will require cataract surgery within 5 years of surgery and within 2 years if SF6 is required. This is of particular interest with the rising use of combined phacovitrectomy in diabetic vitrectomy (Silva et al. 2014).

References

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