



B.O.A.S.

Ophthalmic Anaesthesia News

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Inaugural Annual Conference of the BOAS, Middlesbrough, June 17-19th, 1999

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Ophthalmic Anaesthesia News

The Conference was organised by Dr Chandra Kumar, Dr Chris Dodds and Mr David Smerdon, and was jointly hosted by Cleveland School of Anaesthesia and the Ophthalmology Department, North Riding Infirmary. The venue was the Tall Trees Hotel, which is situated on the edge of North Yorkshire and Cleveland. The organising faculty consisted of anaesthetists and ophthalmologists from the UK, USA and Canada. Many notable names in the Ophthalmic field from different parts of the world took part in the inaugural Conference.



Photo 1 Roy Hamilton showing needle placement in cadaver

The Conference started on Thursday 17th June with 4 different workshops conducted by: Robert Johnson and Gary Fanning on anatomy, Roy Hamilton on retrobulbar anaesthesia, and Caroline Carr, David Smerdon and Chris Dodds on 2 sub tenon anaesthesia workshops. 100 delegates attended the workshops. In the evening Faculty members were welcomed by Dr Ann Dodds at her home.

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The scientific programme was scheduled over two busy days each starting at 9.00 a.m. and continuing well into the evening. The meeting started with a welcome speech by Robert Johnson, President of BOAS who then invited Dr Jeffery Jay, President of the Royal College of Ophthalmologists to deliver his inaugural speech. The scientific meeting then followed on the topics, of the changing faces and complications of ophthalmic anaesthesia, and Joint Colleges guidelines. Dr Tony Rubin chaired this session. Mr John Dart (UK), Mr Tom Eke (UK) and Dr Robert Johnson (UK) were the speakers for this session.

Dr Monica Hardwick chaired the next session and the topics included recent advances in local, general and target controlled intravenous anaesthesia. Dr Tony Rubin (UK), Dr Irwin Foo (UK), Dr Chris Dodds (UK) and Dr Andy Porter were the speakers for this session.



Photo 2 *Bob Hustead showing Anatomical Illustration*

The free paper and abstract presentation followed after lunch and was chaired by Mr David Smerdon.

The last session included development and practice of various local anaesthetic techniques. Dr Chris Dodds chaired this session, with many notable speakers taking part, including Dr Scott Greenbaum (USA), Mr David Smerdon (UK) Dr Ken Rosenthal (USA), Mr Ted Burton (UK) and Dr Roy Hamilton.



Photo 3 *Faculty guests at Chris Dodds's House*

The first day concluded with a dinner for the delegates and faculty in the Tall Trees Hotel and Leisure Complex. Entertainment included live music by New Horizon Live Band and singing by Dr Scott Greenbaum.

The first session of the next day included topics on training, and on complications of ophthalmic anaesthesia. Dr Caroline Carr and Dr Bob Johnson chaired the session jointly. Speakers included Dr Gary Fanning (USA), Mr Graham Kirkby (UK), Dr Chris Dodds (UK) and Dr David Greaves (UK).



Photo 4 *Mrs Ann Dodds, Chris Dodds, Mani Mehta, David Greaves, Gary Fanning, Arline Fanning and others enjoying dinner*

Professor Leo Strunin, President of the Royal College of Anaesthetists delivered his Inaugural speech.

Dr Chandra Kumar chaired the second session of the morning and topics included anaesthesia for paediatric ophthalmology and DCR. Dr Caroline Carr and Dr Gary Fanning gave very stimulating and entertaining lectures.



Photo 5 *Bob Johnson, Gary Fanning, Irwin Foo, K L Kong and Chandra Kumar outside Tall Trees Hotel*

The afternoon session included free papers, the second abstract session and a session on and video presentation of various techniques including Dr Robert Hustead's techniques.

The last session was chaired by Dr Robert Johnson, and two guest lectures were delivered by Dr Roy Hamilton (Canada) on The Harold Ridley Story, and Dr David Wong (Canada) on the future of ophthalmic anaesthesia.

The evening concluded with a dinner for faculty members and remaining delegates hosted by Mrs Suchi Kumar.



Photo 6 *Scott Greenbaum singing live during conference dinner*

The conference would not have been possible without the help of our local Consultant Ophthalmologists and administrative staff, Pat McSorley, Helen Thurlow, Barbara Sladdin and IT support from Mr Stephen Moore.

It was a very successful Inaugural Conference containing high-quality scientific material. This was apparent in many e-mails and letters sent by many delegates and faculty members. We have no doubt that the meeting in Bristol will be equally stimulating and thought provoking.

Chris Dodds(Vice President, BOAS)

David Smerdon(Council Member, BOAS)

Chandra Kumar(Secretary, BOAS)

OAS Report (I), CHICAGO, OCT 1st – 3rd 1999

Monica Hardwick and Ken Barber

Worcester

We arrived in Chicago on Sunday the 26th September to be greeted by hot sunshine. Our room on the 31st floor of the Swissotel overlooked Downtown Chicago with its beautiful buildings, and also Lake Michigan. There was a real holiday atmosphere as we strolled along The Navy Pier, with roller skaters in shorts and live music. Little did we realise that this was the last warm weather we would get!

This was our first ever trip to the States, and we were determined to do more than just attend the conference, so the next day we collected our transport for the next four days – two Heritage Soft-tail Harley Davidson's! We set off north towards Milwaukee with the intention of heading for Door County, but a belt of heavy rain moving South East made riding very unpleasant so we revised our plans and headed North West towards Wisconsin. We had an overnight stop in a small town in the middle of nowhere, where the locals were very friendly and surprised to see two English people albeit on American motorbikes.

The next day was fantastic – a perfect Autumn day spent riding through the forests of Upstate Wisconsin during the Fall – The colours of the trees were breathtaking and there were rivers and lakes everywhere. However the temperature was falling rapidly and despite wearing all our layers of clothing, a stop to buy some thermal underwear was necessary! That evening we reached the shores of lake Superior and spent the night in Bayfield a beautiful little fishing village complete with Clapper-board houses and its own "Apple Festival" due to take place that weekend.

It was with some reluctance that we headed South again the following day, but the weather was still good, the roads wide and empty and the riding a real pleasure. We reached Madison in the early evening and were very impressed. It is the State Capital of Wisconsin, reputed to be one of the most beautiful cities in the States and with one of the highest standards of living. The city is built on an isthmus between two lakes and you can see both of them from the Capitol building, which was designed by the architect of the White House.

The following day we could delay our return to Chicago no longer as the bikes were due back at the dealership by lunchtime – and the meeting started at 2pm! We had explored only a tiny part of the States, but had seen some fantastic scenery, met some really friendly people and had a great time. Harleys are perfect for American roads and provided the weather is good, are a wonderful way to travel. The necessary stops for petrol, food and leg stretching allow for lots of interaction with local people and a feeling of being less of a Tourist and more of a Traveller.

But what about the OAS meeting? After all that was the real reason we had come – wasn't it?

Space does not allow for a blow by blow account of each lecture but there were highlights that must be mentioned.

Jerry Hill, a Nurse Anaesthetist from Florida, told us how his unit performs 12 cataract procedures an hour, that is 45 cataract operations in one theatre list! They have one surgeon who takes three and a half minutes per case, two fully staffed operating theatres, one anaesthesiologist, two nurse anaesthetists and numerous support staff. The peribulbar blocks are performed in a six bedded blocking area, IV sedation and full monitoring is used and each patient spends less than one hour in the facility. Their key objectives are Consistency, Simplicity, and Reproducibility, lessons which could be usefully learnt by many units in this country. But it is impossible to envisage the NHS funding or staffing that intensity of workload, even if it is within the capabilities of clinicians and technology.



Photo 7 Scott Greenbaum chairing session during OAS

There was an interesting lecture by Steven Gayer from Miami on Regional Anaesthesia for "Open Globe " injuries. He described the type of cases where General Anaesthesia may hold such severe risks for the patient that regional techniques should be considered. By blocking orbicularis oculi first to prevent lid squeezing, and using a small volume retro or peribulbar injection, Dr Gayer described how it was possible to provide effective local anaesthesia without causing a rise in intra-ocular pressure and further intra-ocular damage. He stressed that great care must be taken to inject very slowly, watch for any gaping of the wound and avoid lid speculae and compression devices. This is obviously a very useful technique in certain cases but should only be undertaken by the experienced Ophthalmic Anaesthetist and unfortunately will not remove the question on "The Penetrating Eye Injury" from the FRCA syllabus!

Donald Hall from Los Angeles talked about Anticoagulants and Cataract Surgery, a very topical problem in many peoples' practice. He concentrated mainly on the surgical techniques which are safest for the anticoagulated patient concluding that clear corneal incisions and phacoemulsification under topical anaesthesia was the preferred method . It was clear that there was no need to discontinue anticoagulation prior to cataract sugary but there was still no definite recommendation as to a "safe" level. In fact many American units are so unconcerned by anticoagulation that they do not even bother to measure their patients' levels!



Photo 8 Bob Hustead and Paul Honan during OAS Conference

Local Anaesthetic Myotoxicity was another interesting lecture by Quinn Hogan from Milwaukee. He described the pathophysiology of muscle destruction caused by injection of local anaesthetics. This appears to be more prevalent with Bupivacaine, is dose related and exacerbated by repeat injections, or the addition of Hyaluronidase, adrenaline and steroids.

Other very well received lectures were those by Gary Fanning from Sycamore on ocular perforation, and a stunning Audiovisual presentation on Orbital Anatomy by Jonathan Dutton from North Carolina. His atlas of orbital anatomy is a must for any serious Ophthalmic Anaesthetist!

There was a whole session devoted to Subtenons Anaesthesia a subject very dear to our hearts in Worcester, so this created a lot of interest. Scott Greenbaum from New York has been a crucial influence in the States in the development of Subtenons to the extent of designing his own cannula, and he described his experiences of the technique in his characteristic relaxed style! His philosophy is to use a blunt tipped cannula and small volumes of local anaesthetic, which in his hands produces excellent results. The two other speakers both used a sharp needles to inject local anaesthetic into the Subtenons space:- Mark Silverstein from Connecticut performed an anterior injection while Stanley Rous from Florida slid a sharp needle under Tenons Capsule and round to the posterior globe in a most frightening manner – a technique more likely to perforate the sclera cannot be imagined!

One of the most interesting experiences of attending an American meeting is the lively discussion which takes place at the end of each session. At times the verbal interactions become extremely heated and on occasions frankly insulting – but everyone seems to be friends again over a drink in the bar! It was great to meet up with some of our American colleagues who had attended the BOAS meeting in Middlesborough, and also make some new friends.

Chicago itself is a beautiful city and easily explored from the Swissotel where the meeting was held. The Lakeside is most attractive and the high-rise buildings overlooking the lake are architecturally magnificent. Downtown Chicago is full of expensive shops and excellent restaurants, but there are also museums, art galleries and other intellectual attractions.

Our overall impression of the States after our first visit was ... "BIG"! Big buildings, big cars, big roads, big meals, big people but with big hearts! We look forward to our next visit.

Report (II) from OAS Meeting, Oct 1st-3rd 1999, Chicago, Illinois.

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I arrived twenty-four hours in advance of the 13th Scientific Meeting of the Ophthalmic Anaesthesia Society Meeting. Landing at O'Hare Airport to the overwhelming smell of popcorn, alone and not sure where to find the bus to my hotel, I did for a few moments ponder why I was coming to this meeting on the other side of the world. I thought one person I had met on one occasion previously might be there, and remember me if I was lucky. It might be a lonely few days drinking coffee in corners, sneaking off to do a bit of shopping, and sleeping in boring sessions on anatomy. NOT A BIT OF IT!!

"Chicago is my kind a town", sang Sinatra, and now I know why.

The skyline of Chicago draws you in as you crawl from the airport on the freeway, makes London commuting seem a doddle. After I had spent an hour working out which tower was tallest and therefore the Sears Tower (they are in the middle of building a taller one!). I arrived on Michigan Avenue, heart of downtown Chicago. Relieved and delighted I saw people out walking on the streets and discovered the Swissotel was an easy five-minute stroll from shopping, museum, music and restaurant heaven. Checked in and unpacked by 5pm I went for a wander around and down Michigan Avenue, top of the viewing list were the hundreds of life size cows brightly painted and adorning every corner as part of an art festival, my favourite? The cow cut away with lots of holes like a Swiss cheese entitled "Holy Cow", another cow was covered in meccano and bore the legend "Cow Udder Construction", there were many many more.

The following morning before the conference began was shopping bonanza, a start I thought, but it was actually the last shopping I did, because then the fun really began. At the registration I reintroduced myself to Bob Johnson President of BOAS who was kind enough to remember me. Then hand outstretched, I introduced myself to several people before the conference started including Gary Fanning who with Shireen Ahmed was directing the show.

The OAS is an organisation of anaesthesiologists, ophthalmologists and nurse anaesthetists committed to sharing education and information that enables them to provide the highest level of anaesthesia services during ophthalmic surgery. This spread of expertise is reflected in the make up of the Faculty.

Over the four half day sessions there were nineteen presentations. All interesting, many using up to the minute computer technology to great effect. There was a generous amount of discussion time for each session, and the debate was often lively. Nurse anaesthetists were accorded the same respect as their medically qualified colleagues, and gave some interesting presentations.

After Gary Fanning's warm welcome the first session covered the Evolution of Ophthalmic Anaesthesia presented by Prof David Wong followed by the History of Cataract Surgery presented by Dr Fanning's surgical colleague Dr Lynn Hauser. The fun really started with the final presentation of this session on the subject of high volume cataract surgery from Jerry Hill a nurse anaesthetist from the Eye Centres of Florida.

High volume in this instance means 12-15 cases per hour. The progress of the patient through the system was explained in detail, and was very comprehensive. Jerry Hill made it clear that the keys to success of Dr Brown's unit were, consistency and simplicity, concentrating on addressing foreseeable problems prior to surgery. A high level of nursing staff is required together with many prepared sterile sets. One surgeon, two operating rooms, two sets of staff preparing the theatres. David Brown the surgeon literally walks from one theatre to the other, just changing his gloves and doing 3-4 minute operations using a phako tumble technique. The patients are given a preop assessment, and are sedated, then blocked using a retrobulbar technique. Two nurse anaesthetists work together, one sedating and blocking, the other setting patients up and conducting the monitoring. They run an afternoon session, the morning is clinic time for surgeon and anaesthetists. Film was included in the presentation of a real time operation and it really did take 4 minutes. An interesting discussion ensued covering all aspects of this presentation, use of retrobulbar block for such a quick operation was defended on the ground of immobility of the eye speeding up the technique. A very low complication rate of anaesthesia and surgery was claimed. At the end the general feeling was that this was an exceptional setup, and had been a fascinating presentation.

After the break the use of regional anaesthesia in open eye injuries was discussed, most of the operations it was being proposed for were reopening of surgical wounds.

It was during this lecture that the cultural difference between British and American practice began to become clear to me. In Britain most of our eye units are part of NHS multidisciplinary units, with facilities for GA and LA readily available. In America, the practices are very largely independent institutions, and for financial reasons use solely local anaesthesia for most operations, certainly anterior chamber and vitreoretinal. Strabismus, paediatric practice, and orbital work was not discussed during the meeting. There is therefore, a huge desire to do all possible cases under LA. If not they have to be transferred to multidisciplinary centres, the surgeons then lose their business, or have to work in centres which have substandard operating equipment, as they have not had the investment in up to date technology. Once this became clear I understood why in many cases they opted for LA when GA seemed the simpler alternative.

The other presentation of this session was by nurse anaesthetist and managing partner of The Spokane Eye Center, Dan Simonsen. He presented a very comprehensive account of his unit's strategy for quality assessment, the abstract contained five pages of copies of forms, and I got lost on number two. I didn't feel it had much to offer British practice.

The annual reception was held on the 43rd floor of the hotel, was very sociable, and brought forth good company for dinner later.

The next day was a full conference day. It started with a surgical presentation on the intraocular contact lens, which is a method of correcting refraction it an intraocular lens in a phakic eye. Give me a set of daily disposables any time! However it was well presented with film of the procedure.

The prize for best presentation (had there been one) would have gone to Jonathan Dutton, Professor of Ophthalmic Surgery from Duke, his surgical specialty is plastic and orbit. This was a stunning lesson, not only in how to put across difficult anatomical concepts with clarity but also how to make the most of computer technology. His cut away diagrams and movement from section to section to give a clear 3-D picture of the structures behind the globe was outstanding.

Donald Hall a surgeon from Shreveport LA, presented "Anticoagulants and Cataract Surgery", which was based on his own series of cases over twenty-three years. He elucidated the changes in surgery and anaesthesia over that time. He concluded that topical anaesthesia and clear corneal incision were the method of choice in anticoagulated patients, whether on aspirin or warfarin. The use of topical in America is more invasive than our use in Britain. They often use bupivacaine up to 0.75% topically to the cornea, intracameral preservative free lignocaine 2%, and sedation with opioid and midazolam. The Stevens technique of subtenon's using a blunt cannula and dissection is not widely used in the US, and was not mentioned. By this time we were all familiar with the sight of Dr Husted from Minnesota, who is now retired but still a leading light in the OAS. He is very knowledgeable, very experienced and loves to be controversial.

Ocular perforation from LA techniques and management of the results were the subject of the next two presentations by Gary Fanning and Mark Levin a surgeon from Illinois. Both very sound clinical presentations and well given.

They stimulated lively discussion about the incidence of injuries particularly from Dr Husted. More modern techniques including sub tenons were discussed which aim to avoid the possibility of perforation. I took my courage in my hands and joined the discussion, proposing junior anaesthetists be taught the Stevens subtenon's technique.

A comprehensive lecture on the mechanism and prevention of myotoxicity from local anaesthetics followed by Quinn Hogan from Milwaukee. Basically the message was, don't inject into the muscles directly, as this causes the most damage. Anatomical knowledge very important and the more visually direct (e.g. subtenon's!) the less likely to cause muscle damage.

After a wonderful and sociable lunch on the forty third floor (thank you Dr Silverstein for your charming company) we returned for a stimulating afternoon session.

After lunch there were a series of film presentations on methods of retrobulbar and peribulbar block. It was disturbing to see the sedation for the procedure of blocking amounting to a GA with the airway being held. One of the more popular sedatives is thiopentone. there were a preponderance of long needles, transcutaneous techniques, and high concentrations of LA. The emphasis was definitely on anatomical knowledge and all the participators in this section demonstrated this very well. Among the participants in the lecture presentations was Roy Hamilton with his

bent needle low volume retrobulbar injection, demonstrating wonderful understanding of anatomical principles.

After a break it was case presentation time. Gary Fanning presented a case, (not his) of a fit thirty seven year old who had a total retinal detachment of two weeks standing. He was a high myope -14.5D. On examination the other eye also had some lattice and small holes. In his rooms the ophthalmologist put in a retrobulbar block on this very nervous man to laser his eye. A perforation resulted. The result has been devastating with perception of light in the previously detached eye, and count fingers in the perforated eye. As the presentation was taking place Bob Johnson by my side said "Its your turn to tell them to give a GA, we do it every year, they expect it of the British contingent" or words to that effect. So I did, advocating contemporaneous detachment surgery and laser to the other eye. No one argued against me directly but it did not stop them discussing which procedure should have been undertaken first under local. Despite now understanding the business side of American eye surgery I still couldn't believe it.

There were other cases, and most of them were along the lines of LA or GA, to starve or not to starve, etc. Morbid obesity and sleep apnoea were also discussed, and we were all impressed by the clinical acumen of the Steven Gayer from Florida who saved his patient's life by referring her to a sleep clinic when he had difficulty during an emergency VR procedure maintaining her airway with no sedative drugs on board at all.

A great day, very entertaining and informative, was rounded off in fine style by having dinner in the wonderful company of Roy Hamilton and his wife Betty, with a friend of theirs. The Russian Tea House provided lots of good and interesting food, and the company was excellent. After dinner we discovered a free all night concert at the Chicago Symphony Hall, which happens once a year, and enjoyed Daniel Barenboim playing Duke Ellington's Jazz with some colleagues, and a local violinist playing various classical and modern pieces, the atmosphere in the Symphony Hall was electric. Like all surprises it felt like such a treat, not what I had expected at all, and all the more exciting for it. I fell into a dead sleep at half past one in the morning and was noted to be a little tired during the final Sunday morning session!

Presentations on the Sunday morning started of with Bob Johnson giving a very interesting and informative overview of trigeminal herpes and post herpetic neuralgia (PHN). This was a subject on which my knowledge was very sketchy. The main messages I took away were that early anti viral treatment is essential and may reduce PHN by up to fifty percent six months post infection. It is particularly useful in the over fifty age group. The other message was that vaccination is on its way and may prevent reinfection from varicella virus (the cause of zoster) during a persons lifetime. The presentation was much appreciated. There followed an update on topical anaesthesia by Ken Rosenthal, President of the OAS. A lovely presentation using computer facilities and including a few shots of the city's "Cowfest".

The final session of the meeting consisted of three presentations of different methods of subtenon's anaesthesia. All used excellent film footage to demonstrate their techniques. Two were sharp needle techniques, and Stanley Rous's method looked like a transconjunctival peribulbar to me! Dr Silverstein from Connecticut had a very neat 30g needle technique superolaterally, as he pushes the needle tangentially to the globe he lifts the sub tenon layer , he uses a small volume 0.75-3.5 ml of anaesthetic and proof that it is not just sub conjunctival is in the results; he gets very good akinesia. Scott Greenbaum presented a modification of the Stevens technique with his own plastic cannula , as he presented at the BOAS meeting this year, again his results are very impressive.

A summary of the meeting. Two hundred or so delegates were informed and entertained. The atmosphere was very friendly and encouraged good debate. Subtenons anaesthesia got a good airing (some of it from me). I learnt a lot about how a very different health care system works. I didn't agree with everything that was proposed but I have come back thinking in a different way about some of the issues around local anaesthesia. Suggestions for the future? I would like to learn how they tackle paediatric cases, and I felt that perioperative disease, and the consequences of it need a place. It almost seemed like these problems don't exist and that cannot be the case. I look forward to seeing some American colleagues over here for the BOAS meeting. Mostly I would like to thank Gary Fanning and his colleagues for making us all so welcome, and Roy Hamilton for an evening I shall never forget.

I shall go back again, I have old friends to see and the Sears Tower to visit.

A Discourse on Topical Corneo-conjunctival Anaesthesia

R. C. Hamilton, MB BCh FRCPC

Calgary, Alberta, Canada

Whereas the gold standard of eye blocks for many decades had been the retrobulbar block, in recent years the use of this form of regional anaesthesia initially gave some way to peribulbar and more recently to topical corneo-conjunctival and sub-Tenon's cannula methods.

With sub-Tenon's methods, depending on the volume of injectate, there is a variable degree of extraocular movement ablation. However in the case

of true topical corneconjunctival methods there is full retention of extraocular muscle function. Topical anaesthesia methods avoid the risks associated with the placement of regional anaesthesia needles. However it introduces new challenges to cataract surgery.

Some surgeons cannot tolerate the stress associated with the potential of a patient's eye to make an unannounced strong movement, whereas others find this acceptable. The method is best restricted to surgeons experienced in phacoemulsification technology.

The use of topical corneconjunctival anaesthesia in cataract extraction procedures requires that surgeons learn new techniques and adapt to challenges not faced when regional or general anaesthesia methods are used. For instance, under topical anaesthesia one cannot rely on patient fixation or on voluntary immobilization of the eye, and persistent ocular movements may occur. It may therefore be appropriate to immobilize the globe with a second instrument orientated at almost 90 degrees from the first. A stabilization ring may be useful to stop globe movement prior to the initial paracentesis or for clear corneal incisions, and a forceps likewise during scleral incisions.

The decision to use topical anaesthesia (in selected cases), therefore, is predominantly one made by the surgeon. It is inadvisable for the anaesthetist to attempt to produce suitable sedation for the surgeon unhappy with the method.

The presence of any of the following conditions may greatly add to surgical difficulty and risk with topical anaesthesia. Selection of patients should therefore rule out:

1. Those not reasonably conversant in English. If a family member or friend is available to act as language interpreter, this objection can be overruled.
2. The seriously hearing impaired.
3. Patients with extremely small pupils, or very dense or subluxated lenses.
4. Demented or otherwise uncooperative patients.
5. More complex procedures, those expected to be technically difficult or requiring prolonged surgery time.
6. Excessive head tremor or gross degree of nystagmus.

There has been a spate of articles in the medical literature, this side of the Atlantic, over the past twelve months pertaining to topical corneconjunctival anaesthesia. Small improvements in the appropriate application of topical anaesthesia are being explored to provide the most beneficial technique for the patient. The following is a selection of the said papers:

Aqueous humour levels of lignocaine were measurably higher, and patient pain scores superior, with six instillations of 4% lignocaine eyedrops as compared with three. The authors comment that too frequent topical anaesthetic drop application can affect corneal transparency. (1)

Intracameral 1% preservative-free lignocaine (0.2 mL) plus topical amethocaine 0.5% produces superior patient comfort scores and surgeon satisfaction to topical amethocaine alone. (2)

Measured aqueous concentration of lignocaine with intracameral administration plus three drops 4% topical lignocaine are 250 times higher than that found following three drops topical lignocaine alone. Aqueous concentration with six drops 4% lignocaine is three times higher than that found following three drops topical lignocaine. Anaesthesia of the iris is more complete after intracameral lignocaine because of the higher aqueous concentration. (3)

In contrast to higher volume and/or concentration retrobulbar injection of local anaesthetics, with intracameral injection (0.5 mL preservative-free 1% lignocaine) the rate of lignocaine release from the anterior chamber does not result in detectable systemic lignocaine concentrations. (4)

Topical application of lignocaine gel is compared with topical lignocaine drops alone and found superior for patient comfort, ease of administration, prolongation of action, and corneal lubrication effect. (5)

A single topical application of preservative-free 2% lignocaine gel one minute prior to surgery is shown to be equi-analgesic to a series of three topical instillations of 0.5% amethocaine five minutes apart prior to surgery, while causing no significant toxicity to the ocular surface. (6)

Intracameral preservative-free 1% lignocaine (0.5 mL) results in equal patient comfort when compared with a double application of topical preservative-free 2% lignocaine gel. Each is superior to single application lignocaine gel and even more so, topical drops alone. (7)

The degree of corneal endothelial damage associated with cataract extraction surgery may be influenced by the amount of ultrasound energy used, type if any of hyaluronate lubricant used, and composition of the lens implant. In this study in which topical 5% lignocaine drops and 0.3 mL intracameral 1% lignocaine were used, mean endothelial cell loss was less than 6 % at 1 month and 3 months postoperatively. The degree of endothelial loss found in the series was similar to other reports in the literature in which intracameral lignocaine was not used. These results are reassuring regarding the safety of intracameral lignocaine, but larger randomized controlled studies are indicated. (8)

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Reflections from the founder of OAS(USA)

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I just returned from the OAS XIII in Chicago. Repeatedly during the meeting my thoughts went back to BOAS. Both were great meetings and lucky were we who got to go to both. I will be intrigued if your Anaesthetists were as impressed by the OAS session on Subtenon's Techniques, as I was by the BOAS inaugural conference (Middlesbrough) papers and discussion on the technique. To amalgamate both sessions would have to be a fabulous lesson in history, anatomy, technique, clinical strabismus, and the potential for clinical complications. I do hope such an amalgamation can take place at BOAS 2nd conference in Bristol. My remarks in this Newsletter I hope will provide such a stimulus for some bonfire studies, which can be presented at BOAS 2nd Annual Conference, since it is obvious that UK Anaesthetists and USA Anaesthetists are making more and more use of "subtenon technique"—or, that is, making use of what are called Subtenon's techniques.

When and where are solutions placed in the "subtenon's space" really limited to that space, when are injections aimed at the "subtenon's space" really placed anatomically in the intraconal space and when and where are there communications between the spaces? If 2 ml of anaesthetic injected in the "subtenon's space," can produce good clinical anaesthetic conditions and outline the muscles, the back of the eye and the optic sheath, where can more go? But many surgeons and anaesthetists are injecting 7 ml to improve reliability, longevity, and akinesia of their blocks. Does anybody have any CT's or MRI's of these different techniques? Does anybody have any data about the hydraulic forces being applied to the delicate structures that go through the intraconal space enroute to the back of the eye? Does anybody have any studies of retinal and choroidal blood flow?

Hope to see you at BOAS 2nd Annual Conference!

Can local anaesthesia cause indirect damage to the optic nerve in glaucoma?

Tom Eke

Peribulbar and retrobulbar injections may damage the optic nerve. Direct trauma from the needle tip will typically cause immediate and permanent loss of vision. This may be due to cutting of axons by the needle, or elevated intraneural pressure causing direct or ischaemic axonal damage. An indirect mechanism of optic nerve trauma has been proposed, in which a correctly-placed retrobulbar or peribulbar injection may still damage optic nerve fibres. Possible mechanisms include pressure/ischaemic damage secondary to elevated intra-orbital pressure, or pharmacological effects of adrenaline or other injected agents. For patients whose optic nerve is already compromised by glaucoma, indirect damage to a relatively small number of optic nerve axons could cause a significant loss of visual field.

If this effect is real, we would expect to see a worsening of the visual field in a significant number of glaucoma patients who have surgery under peribulbar or retrobulbar anaesthesia. We would expect a spectrum of visual loss, with some patients losing a small amount of field after surgery, and a few losing all of their field, becoming blind.

What evidence is there to support such a hypothesis? Available evidence suggests that some patients do lose vision after surgery, but the contribution from the anaesthetic is not certain. Total loss of visual field ("wipe-out" or "snuff syndrome") is easy to define and measure; more subtle changes are much more difficult to study. Several studies have identified that there is indeed a small but significant incidence of visual field "wipe-out" following trabeculectomy. Published incidence varies between 0% and 13%, with an average incidence of around 1-2%. Risk factors for "wipe-out" include extensive pre-operative field loss, old age, and postoperative changes of intraocular pressure. Studies have not been designed to assess the effect of anaesthesia technique, though most papers discuss the possibility. As to the proposed pathway of damage, both retrobulbar and peribulbar blocks have been shown to cause a marked rise in intraorbital pressure, and to reduce blood flow to the optic nerve head. Evaluation of subtotal peri-operative visual field changes is fraught with problems: blurred vision in the early post-operative period makes it difficult to assess the field, and there is still no standard grading system for partial field loss.

If this threat to sight is real, what can be done about it? Newer, less invasive, techniques of local anaesthesia may be the answer. It is possible to perform trabeculectomy with a combination of topical, intracameral, or subconjunctival anaesthesia. Because the anaesthetic remains anterior to the equator of the globe, the risks to the optic nerve should be minimised.

Is there enough published evidence for us all to change our LA technique for glaucoma patients? Not at present. The newer LA techniques have not yet been proven in large trabeculectomy series, and screening for subtle postoperative field changes remains a problem. Until such time as a large prospective randomised trial has been completed, this will remain an area of speculation and controversy.

Tom Eke MA FRCOphth

Further reading:

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Henry JC. Snuff syndrome. *J Glaucoma* 1994; 3:92-95.

Katz J, Congdon N, Friedman DS. Methodological variations in estimating apparent progressive visual field loss in clinical trials of glaucoma treatment. *Arch Ophthalmol* 1999 Sept; 117:1137-1142.

Anaesthesia for cataract surgery - a new beginning or the end of the road?

Dr Anthony Rubin

Consultant Anaesthetist

Ophthalmic Unit

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In the last few years, anaesthesia for cataract surgery has changed for the majority of patients from general to local anaesthesia. For some time the sharp needle techniques such as retrobulbar, peribulbar or combinations were used most widely. These blocks were highly effective but run the risk of the occasional devastating complication. This could be life threatening in the case of central spread of local anaesthetic or sight threatening if a retrobulbar haemorrhage or globe perforation occurred.

More recently advances in surgical techniques, especially small incision phacoemulsification, have lessened the need for akinesia to the extent that many surgeons are content to operate without any akinesia at all. Similarly pressure considerations, so important in the intracapsular and extracapsular eras, are now largely irrelevant. The result of these changes has been an increase in the use of sub-Tenon's block and a continuing swing towards the use of topical anaesthesia alone, so that while in the UK, topical was used in only 2.9% of cataract operations in 1966 [1], in the USA in 1998 topical was used for more than 30% [2].

Sub-Tenon's block appears to act in the retrobulbar space [3]. It has the advantage of producing moderate to good akinesia, excellent anaesthesia and by using a blunt cannula rather than a sharp needle reduces the chance of needle related complications. Indeed a study of 3000 sub-Tenon's blocks published in 1994 found no systemic or orbital complications [4]. It also has the advantage that it may be re-inforced easily at any time during the surgery, although this is rarely required if a local anaesthetic of suitable duration is used. The same technique may also be used for the "subconjunctival" injection of antibiotic, steroid, etc at the end of surgery. However experience of sub-tenon's block is still relatively limited and when one is talking about rare complications, much larger numbers will be required before definitive conclusions may be drawn as to its safety.

What are the advantages and limitations of topical anaesthesia? For many surgeons it is sufficiently effective without any invasion of the tissues. Thus local complications are minimised. It wears off rapidly so that eye padding is not required and the visual result is immediately apparent. However it requires more patient co-operation to keep the eye relatively still, or the use of the two instruments in the eye at 90 degrees to each other to immobilise it. Secondly only the front of the eye is anaesthetised, and the patient will experience pain if the iris or ciliary body are touched. This may however be overcome by the use of local anaesthetic (usually preservative free lignocaine) infused into the anterior chamber ("intracameral") [5], local anaesthetic soaked on to a sponge in the conjunctival fornices [6] or more recently by the use of lignocaine gel applied to the front of the eye [7].

In Britain the use of sedation is rarer than in the USA, most patients being managed by verbal interaction and explanation and re-assurance. Any trend towards a need for increasing use of sedation would undoubtedly counterbalance the increased safety attributed to the less invasive forms of local anaesthesia. No evidence for this trend was found in the National Survey published in 1999 [8]. However this is another aspect that only increasing experience will resolve.

In conclusion it is apparent that there is a trend towards the use of less invasive methods, which is likely to gather further momentum. However it must be appreciated that adverse reactions may occur with all types of local anaesthesia, and that we should always be prepared for them, and have guidelines in place for their management.

A Joint Royal College of Ophthalmologists and Royal College of Anaesthetists Working Party is currently preparing new guidelines for local anaesthesia, and anyone interested in contributing facts or points of view may write to Professor Alistair Fielder or Dr Anthony Rubin, whose addresses are given below.

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1. Eke T, Thompson JR. The National Survey of Local Anaesthesia for Ocular surgery. I. Survey methodology and current practice. *Eye* 1999; 13: 189 - 195
2. Leaming D. Presentation at the ASCRS
3. Winder S, Walker SB, Atta HR. Ultrasonic localization of anesthetic fluid in sub-Tenon's, peribulbar, and retrobulbar techniques. *J Cataract Refract Surgery* 1999; 25: 56 - 59
4. Fukusaku H, Marron JA. Sub-Tenon's pinpoint anesthesia. *J Cataract Refract Surg* 1994; 20: 673
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Joint Chairmen of the Working Party on Local Anaesthesia for Cataract Surgery

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Local Anaesthesia For Cataract Surgery The York Experience

Dr Z I Sheikh (Staff Anaesthetist) Anaesthetic Department

St James's University Hospital, Lincoln Wing- Leeds- LS9 7TF

Dr DC Child (Consultant Anaesthetist) York District Hospital, York

Introduction

Local anaesthesia for the Cataract surgery is widely used at the York District Hospital since 1994. Peribulbar anaesthesia described by Hamilton [1] is the most popular used local anaesthesia technique by the anaesthetists because of the reduced risks of serious complications [2]. In our continuing effort to improve the patient's satisfaction & provide the safest possible technique we conducted a three-month survey commencing 1st Oct 1998.

In this survey we also wanted to test the variations in methods used by the anaesthetists in performing the eye blocks for Cataract surgery.

Methods

This survey included all patients presenting for cataract extractions that were deemed fit to receive local anaesthesia.

The screening procedure was undertaken by the experienced ophthalmic ward nurses which included a thorough medical history and the ability of the patient to lie still for at least 45 min. Any problems identified by the nurses were addressed by the anaesthetists.

For each patient a questionnaire was completed as shown in Table-1. Sections A, B, C&D of the form were completed by the anaesthetist and section E was completed by the nurses on the ward after the operation.

The method of block performed was according to the preference of the operator.

All anaesthetists used a standard 25 gauge, 25-mm needle to inject the local anaesthetic.

Table-1 Questionnaire

Section-A

1. Personal details of the patient.
2. Local drops used.
 - a. Proximethacaine
 - b. Amethocaine
 - c. Lignocaine
 - d. Benoxinate

- e. Marcaine

3. Monitoring used

- a. Pulse oximeter
- b. NIBP
- c. ECG
- d. Other

Section-B

1. Type of Block performed

- a. Peribulbar
- b. Retrobulbar
- c. Combined
- d. Other

1. Approach

- a. Percutaneous
- b. Transconjunctival
- c. Other

1. Number of injections performed

- a. One
- b. Two
- c. Three

Section C

1. Type of local anaesthetic used & volumes

- a. Lignocaine 2% ----- mls
- b. Bupivacaine 0,75%+ Lignocaine2% ----- mls
- c. Marcaine0,75% ----mls
- d. Prilocaine4% ----- mls
- e. Other

1. Complications

(a) None

(b) Eyelid bruising

- a. Retrobulbar Haemorrhage
- b. Globe perforation
- c. Other

Section D

1. Patient Assessment of the block
 - a. Did you feel any pain on injection? Yes/No
 - b. If yes how bad was it?- Needle prick only
 - c. Pressure only behind the globe
 - d. Discomfort only
 - e. Mild
 - f. Moderate
 - g. Severe

1. Surgeons Assessment of the block
 - a. complete akinesia of the eye
 - b. Minor ocular movements but not troublesome
 - c. Problems due to greater ocular movements
 - d. Would have preferred GA

Section E

1. Did you feel any pain during the operation Yes/NO
 - a. If yes how bad was it? Sense of pressure only
 - b. Sense of touch only.
 - c. Discomfort only
 - d. Mild pain
 - e. Moderate pain
 - f. Severe pain

2. Would you prefer to have the Local Anaesthetic again? Yes/No

3. Would you recommend to a friend? Yes/No

RESULTS

During the three-month period a total number of 214 patients had the local anaesthesia for cataract surgery, 126 fully completed questionnaires were collected giving the response rate of 59%.

The EPI-6 system was used to analyse the data by the Hospital Audit Department.

Ten different operators performed the blocks, out of which nine were Consultant Anaesthetists and one Staff Anaesthetist.

The analysis of section A, B and C of the questionnaire show that:

All patients received an IV cannula a continuous pulse oximetry and the blood pressure checked once in the anaesthetic room.

Proxymethacaine eye drops in combination with amethocaine, lignocaine or bupivacaine were used in all patients to anaesthetise the conjunctiva before the needle injection.

45 (36%) of the patients received one injection, 75 (59.2%) of the patients received two injections & the rest had more than one injection to establish the block.

In 81% of the patients lignocaine 2% was used to perform the block and the rest of the patients received the mixture of lignocaine 2% and bupivacaine 0.75%

Four to six mls of the injectate was used in 39 out of 45 patients who received one injection and in 43 out of 75 patients who received two injections, all other patients received more than six-ml and upto 15-ml of injectate to establish the block.

71% of the blocks were done using the peribulbar technique, 20% combined and 8% using the retrobulbar technique.

In 51% of the cases percutaneous approach, in 40% of the patient's transconjunctival and in 9% of the patients combined approach was used to perform the block.

Eyelid bruising was reported in 5 patients, two in the transconjunctival group and three in the percutaneous group, which resolved in the post-operative period.

Two-month follow-up of these patients did not revealed any long-term complications.

In section D, the surgeons reported complete akinesia in 58 patients and minor ocular movements, which were not troublesome in 68 patients.

Table-2 shows the results of patient's assessment of the block.

Answers to questions "did you feel any pain during the injection"?

Total no of patients	No pain	Needle prick only	Discomfort only	Pressure only	Mild pain	Moderate pain	Severe pain
126-100%	46-36.3%	57-45.2%	9- 7.3%	5- 4.0%	5- 4.0%	3- 2.4%	1- 0.8%

Further analysis of the above questions in relation to the approach use to perform the block is shown in Table 2a

Approach	No pain	Needle prick only	Discomfort only	Pressure only	Mild pain	Moderate pain	Severe pain
Transconj	24	21	2	3	1	0	0
Percut	20	33	4	2	2	2	0
Comb	02	3	3	0	2	1	1

The nurses on the ophthalmic ward recorded patient's satisfaction after the operation.

Table 3 shows the results of the questions asked in section E of the questionnaire.

Patients satisfaction after the operation.

No pain	Pressure only	Touch only	Discomfort only	Mild pain	Moderate pain	Severe pain
109(86.5%)	5 (4.0%)	7 (5.5%)	3 (2.3%)	2 (1.5%)	0	0

The above results were further analysed with regard to the motor block of the eye

	No pain	pressure	touch	discomfort	Mild pain
Minor ocular movements (n=68)	58	2	4	2	2

Complete akinesia(n=58)	51	3	3	1	0
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All of the patients said they would prefer to have the local anaesthetic again and all of

them said that they would recommend to a friend except one patient who suffered severe pain during the insertion of the block was not sure whether to recommend it to a friend.

Discussion

Although it is regrettable that one patient suffered severe pain during the performance of the block, which may be due to the injection in to the bone, the overall results of the survey were satisfactory. There were no serious complications and all the patients were satisfied by the standard of the services provided. The invaluable input from the nursing staff and the theatre staff made the services to run in a very smooth manner.

In our experience we have found that the use of proximethacaine eye drops do not sting, as do the other drops when administered at the start of the procedure. The author has personal experience of this difference.

Our findings show that about half the number of patients did not experience any pain during the needle insertion regardless of the type of block performed. Transconjunctival peribulbar technique appears to have fewer incidences of pain and pinprick during the performance of the block. The volume of injectate used has no relation to the successful block & using less volume of local anaesthetic can produce an effective block.

It was encouraging to note that (86.5%) of patients did not experience any pain during the operation which does not seem to have any direct relation to the volume of the injectate or akinesia of the eye.

Conclusion

This survey has demonstrated that all methods led to similar analgesia during surgery.

The transconjunctival route appears to have some advantage in reducing the pain during injection, which can be further investigated in a larger controlled study.

We have managed to demonstrate that minor ocular movements if not troublesome are surgically acceptable, and that complete akinesia does not guarantee a painless and comfortable procedure.

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Reasons of joining BOAS

BOAS was formed in 1998 to provide a forum for anaesthetists, ophthalmologists and other professionals with an interest in ophthalmic anaesthesia to facilitate co-operation on all matters concerned with the safety, efficacy and efficiency of anaesthesia for ophthalmic surgery. It is concerned with education, achievement of high standards, audit and research. BOAS will organise annual scientific meetings, produce a newsletter and maintain a web page.

Membership

Members of BOAS include anaesthetists, ophthalmologists and other professionals with an interest in ophthalmic anaesthesia.

Membership subscription

Membership runs from January each year. The current subscription is £25.00 payable by bankers standing order.

Liaison and specialist professional advice

With the Association of Anaesthetists of Great Britain and Ireland and the Ophthalmic Anesthesia Society of the USA.

Benefits of Membership

- Opportunity to participate in BOAS annual scientific meetings
- Reduced registration fee for BOAS annual scientific meetings
- Reduced registration fee for other ophthalmic anaesthesia meetings and courses in UK
- Free advice from experts on matters related to ophthalmic anaesthesia
- BOAS newsletter and Directory of Members
- Opportunity to contribute towards development and improvement of ophthalmic anaesthesia
- Access to BOAS web page and scientific literature database
- Eligibility for election to Council of BOAS

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2nd Annual BOAS Conference

28-30th, June 2000

Bristol

Contact Dr.R W Johnson

Consultant Anaesthetist

Bristol Royal Infirmary

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Further details will be available on the web pages shortly

Website: www.boas.org

The training standards are required for each speciality by the Special Training Authority. This draft document was considered by the BOAS council. The draft document is by no means in the final stages and your feedback and comments will be highly appreciated. Please send your comments to the Secretary of the BOAS.

Ophthalmic Anaesthesia Training Standards for Specialist

(Suggested by British Ophthalmic Anaesthesia Society)

Aims and Objectives

1. To promote an understanding of the importance of pre-operative assessment of ophthalmic patients, with particular reference to underlying disease that may affect the course of anaesthesia, and to treatment of suitable patients on a day-case basis.
2. To teach the clinical management of anaesthesia for the following surgical procedures:
 - o Cataract
 - o Corneal graft
 - o Strabismus
 - o Vitrectomy
 - o Retinal detachment
 - o Lacrimal
 - o Penetrating injury
 - o Oculoplastics
 - o Glaucoma
 - o Orbital
 - o Ophthalmic tumours
3. To promote an understanding of the anatomy relevant to local ophthalmic anaesthetic blocks and the anaesthetic techniques used.
3. To teach the clinical criteria used in assessing the suitability of patients for local or general anaesthesia, with reference to the indications and contra-indications for either technique.
3. To teach the principles and practice of airway management for surgery of the face.

Training/Teaching in the following settings

1. **Formal teaching.**
 - i. Theatre Teaching– topic teaching

- ii. Presentations at meetings

"Apprenticeship" Training – provided by the Ophthalmic Anaesthetists.

- i. At operating lists
- ii. In anaesthetic assessment clinics
- iii. On pre-operative ward rounds

"Hands On" experiences acquired in

- i. Operating lists where anaesthetic services are provided for general and local anaesthesia for ophthalmic surgery.
- ii. On call rota for anaesthesia for emergency ophthalmic surgery, and for medical emergencies.

Audit and presentation – Attendance and presentation in the Joint Ophthalmic and Anaesthetic medical audit meetings.

Resources and Time

1. Trainers – Designated Ophthalmic Consultant Anaesthetists.
2. Patient Base – patients referred for all forms of ophthalmic surgery including cataract, strabismus, glaucoma, corneal, oculoplastics, vitrectomy, lacrimal, oncology and orbital. This includes neonates and children. Provision should be made for designated training lists.
3. Equipment – in the operating department up to date anaesthetic machines with open and circle breathing systems, a variety of ventilators suitable for adult and paediatric patients. Full monitoring available in anaesthetic rooms, operating theatres and recovery area. Fiberoptic intubating laryngoscope readily available. Syringe pumps available for anaesthetic infusions.

A full range of anaesthetic equipment for ophthalmic anaesthesia, general or local.

4. Technical support staff –Anaesthetic Nurses and operating department Assistants.
5. Library – Hospital library should have a full range of ophthalmic textbooks and journals. Including a small range of relevant anaesthetic textbooks and journals. "Bench" books for ready reference to be kept in the anaesthetic office and operating theatres.

Methods

1. Pre-operative assessment

- i. Training in the assessment and pre-operative management of ophthalmic patients with common medical conditions such as diabetes, chronic obstructive airways disease, ischaemic heart disease and hypertension.
- ii. Training in the assessment and pre-operative management of patients with uncommon medical disorders, which are commonly seen in ophthalmic patients.
- iii. Training in the assessment and pre-operative management of paediatric ophthalmic patients including those with associated congenital abnormalities.
- iv. Training in the assessment of patients' suitability for day case ophthalmic surgery and their pre-operative management.
- v. Training in the assessment of the suitability of patients for general or local anaesthesia for ophthalmic surgery and the pre-operative management for either.

Anaesthetic management – training in the performance of the following anaesthetic procedures.

- i. **To perform under supervision** – general anaesthesia in adults and children over five years of age for the following surgery:-
 - o Cataract
 - o Corneal graft
 - o Glaucoma

- o Lacrimal
- o Penetrating injury
- o Retinal detachment
- o Strabismus
- o Vitrectomy

Local anaesthesia in adult patients for cataract surgery. Intubation using the fiberoptic laryngoscope.

i. To assist with:-

- o General anaesthesia for ophthalmic procedures in children under five years of age, including EUAs, syringing and probing of lacrimal ducts and dacryocystograms.

Anaesthesia for the following surgery:-

- o Oculoplastics
- o Orbital
- o Ophthalmic tumours

- i. **To perform in an emergency** – basic and advanced life support in any medical emergency and the subsequent transfer of the patient to intensive care in another hospital

Post operative care

- i. Training in the postoperative management of ophthalmic patients, with particular reference to pain relief and prevention and treatment of postoperative nausea and vomiting, especially in day-case patients.
- ii. Training in the management of postoperative medical problems and, where appropriate, transfer of patients for intensive care.

Suggested numbers of Procedures

Perform under supervision

Anaesthesia for the following surgery in adults and children over 5 years of age:-

Cataract - general anaesthesia 10

- local anaesthesia 10

Corneal graft 8

Strabismus 5

Retinal detachment 5

Glaucoma 5

Vitrectomy 5

Penetrating eye injury 3

Lacrimal 2

Observe

Anaesthesia in children under 5 years of age for the following procedures:-

EUA for glaucoma 5

EUA for other ophthalmic procedures 3

Syringe and probe 5

Anaesthesia in adults for the following surgery:-

Oculoplastics 8

Orbital 2

Ophthalmic tumours 2

The teaching and training will be provided by designated Ophthalmic Anaesthesia trainers and one of them should be a lead clinician for signing the Ophthalmic Anaesthesia Training Assessment Form.

Ophthalmic Anaesthesia Training Assessment form for Specialist
(Suggested by British Ophthalmic Anaesthesia Society)

Name of the trainee: Dr.....

Period of Training and Assessment from.....to.....

Name of the Hospital.....

Pre-operative assessment

1 Has the training in the assessment and pre-operative management of ophthalmic patients with common medical conditions such as diabetes, chronic obstructive airways disease, ischaemic heart disease and hypertension. Been satisfactorily completed? **Yes/No.**

2 Has the training in the assessment and pre-operative management of patients with uncommon medical disorders such as Marfan's syndrome, Myotonia dystrophica, Myasthenia gravis and Sickle-cell disease been satisfactorily completed? **Yes/No.**

3 Has the training in the assessment and pre-operative management of paediatric ophthalmic patients including those with associated congenital abnormalities been satisfactorily completed? **Yes/No.**

4 Has the training in the assessment of patients' suitability for day case ophthalmic surgery and their pre-operative management been satisfactorily completed? **Yes/No.**

5 Has the training in the assessment of the suitability of patients for general or local anaesthesia for ophthalmic surgery and the pre-operative management for either been satisfactorily completed? **Yes/No.**

Anaesthetic management – training in the performance of the following anaesthetic procedures.

1 To perform under supervision – general anaesthesia in adults and children over five years of age for the following surgery:-

- o Cataract
- o Corneal graft
- o Glaucoma
- o Lacrimal
- o Penetrating injury
- o Retinal detachment
- o Strabismus
- o Vitrectomy

Local anaesthesia in adult patients for cataract surgery. Intubation using the fiberoptic laryngoscope.

Has the trainee received above instructions? Yes/No

2 To assist with:-

- o General anaesthesia for ophthalmic procedures in children under five years of age, including EUAs, syringing and probing of lacrimal ducts and dacryocystograms.

General anaesthesia for the following surgery:-

- o Oculoplastics
- o Orbital
- o Ophthalmic tumours

**Unsatisfactory /
Competent / Skilled**

3 To perform in an emergency – basic and advanced life support in any medical emergency and the subsequent transfer of the patient to intensive care in another hospital.

**Unsatisfactory /
Competent / Skilled**

Post operative care

4 Training in the post operative management of ophthalmic patients, with particular reference to pain relief and prevention and treatment of post operative nausea and vomiting, especially in day-case patients.

5 Training in the management of post operative medical problems and, where appropriate, transfer of patients for intensive care.

**Unsatisfactory /
Competent / Skilled**

Suggested numbers of Procedures

Perform under supervision

Anaesthesia for the following surgery in adults and children over 5 years of age:-

Cataract - General anaesthesia 20

-Local anaesthesia 20

Corneal graft 8

Strabismus 5

Retinal detachment 5

Glaucoma 5

Vitrectomy 5

Penetrating eye injury 3

Lacrimal 2

Has the trainee performed the above procedures? **Yes/No**

Observe

Anaesthesia in children under 5 years of age for the following procedures:-

TUA for glaucoma 5

EUA for ophthalmic Examination 3

Syringe and probe 5

Anaesthesia in adults for the following surgery:-

Oculoplastics 8

Orbital 2

Ophthalmic tumours 2

Has the trainee observed the above procedures? **Yes/No**

I, Dr.....designated Ophthalmic Anaesthesia Trainer hereby confirm that

Dr.....has satisfactorily completed the training in Ophthalmic Anaesthesia according to the guidelines

"Ophthalmic Anaesthesia Training Standard"

New benefits for BOAS members

Now BOAS members will now receive free Newsletter from OAS.

Anaesthetists BOAS member can receive Journal of Cataract and Refractive Surgery at the reduced rate of £65 per year.

Enquiry to

Andree Welsh

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