B.O.A.S.

Ophthalmic Anaesthesia News

The Official Newsletter of the British Ophthalmic Anaesthesia Society

Issue 7, November 2002

Page - Contents

BOAS Registered Office
Department of Anaesthesia
James Cook University Hospital
Middlesbrough TS4 3BW, UK
Tel 01642854601
Fax 01642854246
Email: secretary@boas.org
Website: www.boas.org

Ophthalmic Anaesthesia News
Editor:
Dr Chandra Kumar

Associate Editors
Dr Stephen Mather
Mr David Smerdon
Dr Sean Tighe

Articles of interest for future issues or correspondence should be sent by post, disk or email:

Dr Chandra Kumar
Secretary, BOAS
James Cook University Hospital
Middlesbrough
TS4 3BW, UK
secretary@boas.org

Peribulbar Anaesthesia "Sans Bulb"

Monica Hardwick
Consultant Anaesthetist, Worcester

Introduction

My Wednesday morning theatre list is very predictable. Seven phako cataracts under local Anaesthesia, usually sub-tenon's blocks with the occasional peribulbar, a coffee break and a civilised finish time. But Weds 5th June 2002 was different. The surgeon presented me with not one, but two emergency additions to the list – this was unheard of. The cases were both re-suturing of conjunctiva following enucleation and insertion of orbital implant two weeks previously. It was thought that topical anaesthesia and some subconjunctival infiltration would be all that was required.

Case 1

The first patient was a fifty year old man with hypertension, who had suffered a painful blind right eye due to rubiotic glaucoma. He had received a general anaesthesia for enucleation and insertion of orbital implant two weeks previously, but the conjunctiva had failed to heal in the centre of the socket leaving a deficit of several millimetres. The patient was very anxious in the anaesthetic room and despite reassurance and explanation it became obvious that he was not going to be able to tolerate surgery with topical anaesthesia and Subconjunctival infiltration alone. A 22G cannula was inserted in the dorsum of his right hand, and a pulse oximeter attached. He was given two milligrams of Midazolam intravenously, and then topical Proxymetacaine 0.5% and Amethocaine 1% were applied to the conjunctiva. A peribulbar block was performed with 2% Lignocaine containing 1:200,000 Adrenaline and 30 iu/ml of Hyalase. Despite the absence of the globe it was relatively easy to use the same landmarks for the two injections. The first was in the inferolateral conjunctival fornix, directing a 25G, 25mm needle first inferiorly, below the implant, and then upwards, backwards and medially to follow the floor of the orbit. After careful aspiration 4mL of the solution was injected in this position. The medial injection was performed immediately lateral to the medial canthus and the needle directed straight backwards parallel with the nasal septum, where a further 4mL of solution was injected after aspiration. The eyelids were closed and gentle digital massage applied for five minutes, after which the block was checked in the usual way. When the patient was asked to open his eyes the eyelids were flaccid, and on testing eye movements the orbital implant did not move, proving that a motor block of the extraocular muscles had been achieved. There was an obvious circum-ocular pallor present and paralysis of orbicularis oculi. The conjunctival suturing was performed under the microscope and took approximately 15 minutes to complete, during which time the patient received further topical Amethocaine but tolerated the procedure well.

Case 2

The second patient was a 70 year old man with a past medical history of ischaemic heart disease who had a painful blind right eye from glaucoma. He had undergone enucleation and orbital implant under general anaesthesia two weeks previously, but had a deficit in the conjunctival suture line overlying the implant. A similar peribulbar technique to that in Case 1 was performed on the second patient with the exception of the intravenous sedation. Again, despite the absence of the globe it was relatively easy to perform the block using the usual landmarks and the same degree of motor block was achieved. The patient tolerated the re-suturing procedure with no discomfort. One week later this patient returned for removal of the implant and one of my Anaesthetic colleagues performed a peribulbar block in exactly the same way with the same degree of success.

Discussion

These two cases illustrate that it is possible to provide anaesthesia to the contents of the orbit, the conjunctiva, eyelids and orbicularis oculi with a peribulbar technique despite the absence of the globe. It is also possible to test the motor components of the block in exactly the same way as if the globe had been present.

The Ophthalmic unit in Worcester comprises an outpatients department and operating theatre with facilities for local anaesthesia only. Any general anaesthetic cases are arranged in a general operating theatre on a different site. Therefore any patients presenting to the outpatients department with urgent surgical problems can be dealt with immediately, providing that local anaesthesia is appropriate. Without the use of peribulbar anaesthesia it is probable that both these patients would have needed transfer to the main hospital, preparation for general anaesthesia and to wait for a slot in the emergency operating theatre schedule.

There are a number of papers in the literature describing the use of peribulbar anaesthesia for enucleation and post operative pain relief [1,2,3,4]. I was unable to find any reports of the use of peribulbar anaesthesia for procedures on an enucleated socket. I believe therefore that the above report may be the first in the literature on this particular use of peribulbar anaesthesia.

References

1. Calenda E, Quintyn JC, Djima H. Ball implant filled with local anaesthetic in addition to peribulbar to relieve postoperative pain in a child. Regional Anaesthesia and Pain Medicine.27(3):337, 2002 May-June.
2. Jordan DR. Pain control after orbital implant surgery. [letter; comment.] Archives of Ophthalmology. 118(9): 1306-7, 2000 Sep.
3. Calenda E, Retout A, Muraine M. peribulbar anaesthesia for postoperative pain control in eye enucleation or evisceration: 31 cases. Journal Francais d Ophthalmologie. 22(4):426-30, 1999 May.
4. Calenda E, Muraine M, Olle P. Local Anaesthesia for preoperative and postoperative pain control in eye enucleation or evisceration: 20 cases. Regional Anaesthesia and Pain Medicine. 23(5):525-6, 1998 Sep-Oct.

Prospective audit of sub-Tenon's cannulae

Dr Chandra M Kumar
Consultant Anaesthetist

Prof Chris Dodds
Consultant Anaesthetist

Dr R Chabria
Clinical Assistant

Department of Anaesthesia
James Cook University Hospital
Middlesbrough TS4 3BW, UK

Summary
In a prospective audit, 150 patients undergoing routine phacoemulsification cataract surgery received sub-Tenon's block through three different sub-Tenon's cannulae of increasing length (anterior, mid and posterior sub-Tenon's cannulae). Five ml of 2% lidocaine with 150 units of hyaluronidase was administered. 30 to 56% of patients experienced some degree of discomfort during the administration of block but patients in the anterior sub-Tenon's group experienced least discomfort. Chemosis and conjunctival haemorrhage occurred in large number of patients irrespective of cannula length. The aggregate akinesia score of <4 occurred within 6 minutes in 92%, 100% and 92% with anterior, mid and posterior sub-Tenon's cannulae respectively. Two patients in each (posterior and anterior sub-Tenon's groups) had akinesia score >4 that required supplementary injections. Retained activity of the superior oblique muscle and lid muscles were more frequent in the anterior sub-Tenon's group.

Anaesthesia and near complete akinesia can be achieved with 5 ml of 2% lidocaine (and 150 units of hyaluronidase) through various sub-Tenon's cannulae but discomfort during the administration of block, chemosis, conjunctival haemorrhage and persistent superior oblique muscle may be anticipated and patients should be warned appropriately.

Keywords: Anaesthesia, local, ophthalmic, eye, block, regional, sub-Tenon's, sub-Tenon's cannulae

Introduction

The sub-Tenon's approach for local anaesthetic regional blockade of the globe and orbit is becoming increasingly popular in the UK [1,2,3]. It provides profound anaesthesia and has the advantage of being a very safe technique with the large safety margin. The technique is safer than needle blocks such as retrobulbar and peribulbar blocks because a sub-Tenon's block is achieved by delivery of the local anaesthetic agent into the sub-Tenon's space through a blunt cannula. The cannula is placed in sub-Tenon's space under direct vision unlike the blind insertion of a sharp needle into the orbit in retrobulbar and peribulbar areas [4,5,6]. The injection of the local anaesthetic agent into various parts of the potential sub-Tenon's space (posterior, mid or anterior sub-Tenon's space) has been described using various cannulae [7,8,9]. The three most commonly used cannulae in the North Riding Infirmary, Middlesbrough, are a metal curved posterior sub-Tenon's cannula described by Stevens [7], a plastic cannula for mid sub-Tenon's injection by Kumar and Dodds [8] and a short plastic anterior sub-Tenon's cannula described by Greenbaum [9]. Although major complications are rare [10,11,12,13], minor complications or problems such pain on injection, chemosis, conjunctival haemorrhage and residual rectus muscle activities are frequently reported with these cannulae published as a personal series [5,6,14]. We are not aware any study which has compared the incidence of these minor complications using different cannulae.

In this prospective audit, we compared the onset of block, adequacy of anaesthesia and akinesia, incidence of minor complications using 3 different lengths of cannulae. The access to the sub-Tenon's space, local anaesthetic agent, volume and adjunct were standardised.

Materials and Methods

After obtaining Local Hospital Ethic Committee approval, 150 patients scheduled for routine phaco emulsification cataract surgery under sub-Tenon's block were included in this prospective audit. Informed consent was obtained by the investigating anaesthetists. Patients were excluded if they were unwilling to participate, if there were communication or language problems, patients on anticoagulant and non steroidal anti-inflammatory drugs or if there was any history of allergy to amide local anaesthetic agents. Selection of sub-Tenon's cannula was random.

Patients were not starved and no sedative or premedication was given. After the patient's arrival in the anaesthetic room baseline globe and eyelid movements were assessed. Topical anaesthesia of conjunctiva and cornea was achieved by administering 2-3 drops of 0.5% proxymetacaine. Baseline blood pressure and haemoglobin saturation were noted. An intravenous line was secured. A small incision was made in the conjunctiva and Tenon's capsule 5 mm away from the limbus in the inferonasal quadrant using a forceps and scissors without using a diathermy. 5 mls of 2% lidocaine containing 30 units/ml of hyaluronidase was slowly injected through a sub-Tenon's cannula. Pain on injection (Verbal Rating Score, 0=representing no pain to 10=worst imaginable pain), chemosis (minor, severe and the quadrant), conjunctival haemorrhage (minor, severe and the quadrant), residual ocular muscle movements (scored for each direction of gaze in superior, inferior, medial and lateral directions 0=no movement, 1=minor movement, 2=moderate movement, 3=maximum movement a maximum total of 12) and forced lid movements (closure and opening) were noted at 2, 4 and 6 minutes by nursing staff who were not involved in the administration of block. If akinesia score was <4, the patient was then transferred to theatre for surgery. If the akinesia was more >4 at the end of 6

minutes, a supplementary injection was given. Any intra-operative pain or discomfort was noted.

Results

There were 50 patients in each group. No patients met the exclusion criteria for the study. There was no significant difference in patients' characteristics between the three groups. The patients' demographic details and results are shown in **Table 1.**

Table 1 Patients demographic and results

Sub-Tenon's Cannulae (number of patients)	Posterior (50)	Mid (50)	Anterior (50)
Age in years (range)	72 (40-89)	78 (46-96)	76 (42-94)
Sex (M/F)	26/24	18/32	20/30
Axial length in mm (Mean and range)	23.34 (22.99-28.22)	23.25 (21.08-27.65)	23.30 (20.88-26.61)
Pain during injection	56% (28)	46% (23)	30% (15)
Chemosis	32% (16))	20% (10)	76% (38)
Conjunctival haemorrhage	20% (10)	20% (10)	56% (28)
Akinesia score <4	92% (46)	100% (50)	92% (46)
Retained superior oblique movements	16% (8)	10% (5)	32% (16)
Presence of lid opening	42% (21)	30% (15)	90% (45)
Presence of lid closure	20% (10)	30% (15)	80% (40)

Discomfort during the administration of block was reported in 30%-56% of patients and the patients in the anterior sub-Tenon's group experienced least pain. The Verbal Analogue Rating Score did not exceed >3 except in one patient who rated the score to a maximum of 9 on both during the administration of block as well as during the insertion of intravenous cannula. Chemosis occurred in 32%, 20% and 76% of patients in posterior, mid and anterior sub-Tenon's cannula groups respectively. Conjunctival haemorrhage was common in the anterior sub-Tenon's group (56%). The majority of patient had an aggregate akinesia score of <4 within 6 minutes but two patients in each posterior and anterior sub-Tenon's groups required supplementary injections. Retained activity of superior oblique muscle and lid movements were noted in a large number of patients.

Discussion

Access to sub-Tenon's space can be achieved from all four quadrants [7,15,16,17], however, access to the space by inferonasal quadrant dissection is the commonest approach used because placement of the cannula in the inferonasal quadrant allows good fluid distribution superiorly, avoids the area of the surgery and reduces the risk of damage to the vortex veins.

Many cannulae, both commercially marketed or modified "in-house", are available for this block. The cannulae can be either metal or plastic. Most metal cannulae are about 1 inch long (posterior sub-Tenon' cannula popularly known as the Stevens' cannula)[7], curved with a blunt end, and come in various sizes ranging from 19 to 23 gauges. The cannulae have either an end or a side hole. The Kumar-Dodds cannula is made of plastic [8], blunt 21G with end hole, approximately 18mm long and has been described for mid sub-Tenon's injection. Greenbaum's anterior sub-Tenon's cannula [9] is made of plastic and is blunt 15G, 'D' shaped, flat bottomed, approximately 12mm long and 2mm in diameter. The opening on the flat bottom is designed in such a way that it faces the sclera after insertion. Alternatives to these cannulae include: Southampton cannula (metal), [5] the ophthalmic irrigation cannula [18] (metal), and intravenous cannula sheath (plastic) [19,20]. The selection of a cannula depends on the availability and the preference of the anaesthetist. The majority of published studies have been based on the use of metal cannulae. In our unit, three sub-Tenon's cannulae (posterior, mid and anterior cannulae) are in use hence patients who received sub-Tenon's block by these cannulae were included in this prospective audit.

The ideal agent for ophthalmic block should be safe, painless to inject and produce a rapid onset of dense motor and sensory block, the duration of which must be sufficient for surgery yet not excessively prolonged. The speed of onset is partially determined by the properties of the anaesthetic, but more directly by the proximity to the nerves. All the commonly used agents have a place, the choice depending on the technique used and the duration of action required to cater for a variety of surgical procedures and surgical skills. 2% lidocaine (with or without epinephrine and / or hyaluronidase) is the most commonly used agent [21].

There is a wide variation in the volume of local anaesthetic used in sub-Tenon's block, and this has been a subject of debate. The volumes injected vary from 1 [9] to 11ml [22] but the range of 3 to 5ml is most commonly used [23]. We have previously shown that smaller volumes usually provide globe anaesthesia but larger volumes are required if akinesia is important and 5ml of 2% lidocaine usually suffices [14]. Most ophthalmic anaesthetists in our unit use this volume.

The incidence of pain during sub-Tenon's injection is reported to occur in up to 44% of patients, although it is rarely more than minimal [7]. Usually this is scored by a visual analogue scale and there is no universal way to avoid this pain or to predict who will suffer. We used a verbal analogue score scale because most of the cataract patients suffer from poor vision. Sub-Tenon's block by posterior cannula in this audit was associated with relatively more discomfort during injection and the incidence was similar to other previously reported studies [7]. Patients who received the block through an anterior sub-Tenon's cannula suffered least. We believe that the introduction of longer cannula and injection deep into the sub-Tenon's space may be the reasons for this discomfort. Our unpublished observation has shown that premedication or sedation of patients during sub-Tenon's injection has not added any benefit and neither premedication nor sedation is used in our unit.

Chemosis signifies anterior sub-conjunctival injection of the anaesthetic agent. This usually occurs if a large volume of local anaesthetic is injected and if the Tenon's

capsule is not dissected properly. The incidence of chemosis varies from 25-100% [5,6,14] and there is an increased incidence with short, anterior cannulae and it may not be confined to the site of injection [14]. It usually resolves after the application of gentle digital pressure, and no intra-operative problems have been reported. Chemosis in our cases was seen mostly in the area of dissection but in some cases also spread to the other quadrants. Chemosis occurred more frequently in patients who received injection through anterior sub-Tenon's cannulae and we believe this may be presumably due to anterior injection.

Conjunctival haemorrhage is often caused by fine vessels being severed on making the conjunctival cut. The incidence of haemorrhage varies from 20-100% [5,7,14]. Conjunctival haemorrhage occurred with all the cannulae and it was not related to the length of the cannulae. We also noted that a few patients had conjunctival bleeding in other quadrants presumably due to tearing of fine blood vessel during injection following spread of the local anaesthetic into the subconjunctival area contributing to both chemosis and haemorrhage. The patients should be warned of this minor complication during the preoperative consultation.

Anaesthesia accompanying sub-Tenon's block is usually very good but akinesia is variable and may not be complete [9]. Akinesia is volume dependent and if 4-5mls of local anaesthetic is injected, the majority of patients will develop akinesia [14]. In this audit we used 5 mls of local anaesthetic agent to minimise any effect of volume changes. A large proportion of patients developed significant reduction in ocular movements within 6 minutes irrespective of the cannula used; however, many patients exhibited persistent residual superior oblique muscle activity and lid movements. None of the surgeons reported any dissatisfaction because of the presence of these movements.

Conclusion

Adequate reduction in ocular movements and anaesthesia can be achieved by both short and long cannulae. Discomfort on injection, chemosis and conjunctival haemorrhage can be associated with sub-Tenon's block. Retained activity of superior oblique and lid movement may be present. The patient should receive adequate preoperative explanation.

Acknowledgments

The abstract of this study was presented in the 3rd National Conference of the British Ophthalmic Anaesthesia Society (BOAS) August 2001, Middlesbrough, UK.

References

1 Eke T, Thompson JR. The National Survey of Local Anaesthesia for Ocular Surgery. II. Safety profiles of local anaesthesia techniques. Eye 1999; 13: 196-204.

2 Eke T, Thompson JR. The National Survey of Local Anaesthesia for Ocular Surgery. I. Survey methodology and current practice. Eye 1999; 13: 189-95.

3 Smerdon D, Kumar CM, Dodds C, Wlesh A. Practice and preferences of UKISRCS members(Abstract). British Ophthalmic Anaesthesia Society Meeting, August 2001, Middlesbrough.

4 Zafirakis P, Voudouri A, Rowe S, Livir-Rallatos G, Livir-Rallatos C, Canakis C, Kokolakis S, Baltatzis S, Theodossiadis G. Topical versus sub-Tenon's anesthesia without sedation in cataract surgery. J Cataract Refract Surgery 2001; 27:873-79.

5 Verghese I, Sivraj P, Lai YK. The effectiveness of sub-Tenon's infiltration of local anaesthesia for cataract surgery. Aust N Z J Ophthalmol 1996; 24: 117-120.

6 Roman SJ, Chong Sit DA, Boureau CM, Auclin FX, Ullern MM. Sub-Tenon's anaesthesia: an efficient and safe technique. Br J Ophthalmol 1997; 81: 673-6.

7 Stevens JD. A new local anesthesia technique for cataract extraction by one quadrant sub-Tenon's infiltration. Br J Ophthalmol 1992; 76: 670-4.

8 Kumar CM, Dodds C. A disposable plastic sub-Tenon cannula. Anaesthesia 2001; 56:399-400.

9 Greenbaum S. Parabulbar anesthesia. Am J Ophthalmol 1992; 114: 776.

10 Spierer A, Schwalb E. Superior oblique muscle paresis after sub-Tenon's anesthesia for cataract surgery. J Cataract Refract Surg 1999; 25: 144-5.

11 Olitsky SE, Juneja RG. Orbital haemorrhage after the administration of sub-Tenon's infusion anaesthesia.Ophthalmic Surg Lasers 1997; 28: 145-6

12 Frieman BJ, Friedberg MA. Globe perforation associated with subtenon's anesthesia. Am J Ophthalmol 2001; 131:520-1.

13 Jaycock PD, Mather CM, Ferris JD, Kirkpatrick JNP. Rectus muscle trauma complicating sub-Tenon's local anaesthesia. Eye 2001; 15: 583-586.

14 Kumar CM, Dodds C. Evaluation of Greenbaum sub-Tenon's block. British J Anaesth 2001: 87: 631-3.

15 Fukasaku H, Marron JA. Sub-Tenon's pinpoint anesthesia. J Cataract Refract Surg 1994; 20: 468-71.

16 Ripart J, Metge L, Prat-Pradal D, Lopez FM, Eledjam JJ. Medial canthus single-injection episcleral (sub-tenon anesthesia): computed tomography imaging. Anesth Analg 1998; 87: 42-5.

17 Stevens JD, Franks WA, Orr G, Leaver PK, Cooling RJ. Four-quadrant local anaesthesia technique for vitreoretinal surgery. Eye 1992; 6: 583-6.

18 Rubin AP. Personal communication.

19 Kumar CM, Williamson S, Chabria R. A simple method of sub-Tenon anaesthesia delivery. Anaesthesia 2000; 55: 612-3.
20 Amin S. Description of a new technique for delivering sub-Tenon's anaesthesia (Abstract). British Ophthalmic Anaesthesia Society Meeting, August 2001, Middlesbrough
21 McLure HA. Rubin AP. Local anaesthesia for ophthalmic surgery. Current Anaesthesia and Critical Care 1999; 10: 40-47
22 Li HK, Abouleish A, Grady J, Groeschel W, Gill KS. Sub-Tenon's Injection for Local Anesthesia in Posterior Segment Surgery. Ophthalmology 2000; 107: 41-46.
23 Tokuda Y, Oshika T, Amano S, Yoshitomi F, Inouye J. Anesthetic dose and analgesic effects of sub-Tenon's anesthesia. J Cataract Reftract Surg 1999; 25: 1250-53.

No Anaesthesia Cataract Surgery with the Karate Chop Technique

Dr. Athiya Agarwal
Dr. Sunita Agarwal &
Dr. Amar Agarwal

Eye Research Centre & Dr.Agarwal's Group of Eye Hospitals
Chennai (India), Bangalore (India), Dubai (Uae)
19 Cathedral Road, Chennai- 600 086, India

15 Eagle Street, Langford Town, Bangalore-560 025, India

Villa No.2, Roundhouse, Al Wasl Rd, Jumeira, Pb 9168, Dubai

TEL- + 91 44 811 6233
FAX- + 91 44 811 5871
WEBSITE- **http://www.dragarwal.com**
E-MAIL- **dragarwal@vsnl.com**

Introduction
On June 13th 1998 at Ahmedabad, India the first No anaesthesia cataract surgery was done by the authors (Amar Agarwal) at the Phako & Refractive Surgery conference. This was performed as a live surgery in front of 250 delegates. This has opened up various new concepts in cataract surgery [1,2,3,4]. In this surgery the technique of karate chop was used.

For high refractive errors, clear lens extraction with phacoemulsification is a very good alternative. In such cases, if necessary one can implant an Intra Ocular Lens (IOL). This technique is very useful in hypermetropes, as Lasik does not give excellent results in such cases. The most commonly done refractive surgery in the world is not prk or lasik it is cataract surgery. This is why this article will discuss phacoemsulification techniques for removal of cataract as well as clear lens extraction.

Nucleus removal techniques
Since the introduction of Phacoemulsification as an alternative to standard cataract extraction technique, surgeons throughout the world have been attempting to make this new procedure safer and easier to perform while assuring good visual outcome and patient recovery. The fundamental goal of Phaco is to remove the cataract with minimal disturbance to the eye using least number of surgical manipulations. Each manoeuvre should be performed with minimal force and maximal efficiency should be obtained.

The latest generation Phaco procedures began with Dr.Howard Gimbel's "divide and conquer" nuclear fracture technique in which he simply split apart the nuclear rim. Since then we have evolved through the various techniques namely four quadrant cracking, chip and flip, spring surgery, stop and chop and phaco chop.

Clear lens removal by phacoemulsification is a very good alternative to manage refractive errors. In these cases, as the nucleus is soft one can use only Phacoaspiration to remove the nuclei, rather than use ultrasound power.

Karate chop
Unlike the peripheral chopping of Nagahara or other stop and chop techniques we have developed a safer technique called "Central Anterior Chopping" or "Karate Chop". In this method the phaco tip is embedded by a single burst of power in the central safe zone and after lifting the nucleus a little bit (to lessen the pressure on the posterior capsule) the chopper is used to chop the nucleus. In soft nuclei, it is very difficult to chop the nucleus. In most cases, one can take it out in toto. But if the patient is about 40 years of age then one might have to chop the nucleus. In such cases we embed the phaco probe in the nucleus and then with the left hand cut the nucleus as if we are cutting a piece of cake. This movement should be done three times in the same place. This will chop the nucleus.

Soft cataracts
In soft cataracts, the technique is a bit different. We embed the phaco tip and then cut the nucleus as if we are cutting a piece of cake. This should be done 2-3 times in the same area so that the cataract gets cut. It is very tough to chop a soft cataract, so this technique helps in splitting the cataract.

Agarwal chopper
We have devised our own chopper. The other choppers, which cut from the periphery, are blunt choppers. Our chopper is a sharp chopper. It has a sharp cutting edge. It also has a sharp point. The advantage of such a chopper is that you can chop in the centre and need not go to the periphery.

In this method by going directly into the centre of the nucleus without any sculpting ultra sound energy required is reduced. The chopper always remains within the rhexis margin and never goes underneath the anterior capsule. Hence it is easy to work with even small pupils or glaucomatous eyes. Since we don't have to widen the pupil, there is little likelihood of tearing the sphincter and allowing prostaglandins to leak out and cause inflammation or cystoid macular edema. In this technique we can easily go into even hard nuclei on the first attempt.

Our karate chop technique

Incision
Ours is a modification of the Nagahara chop. The important feature is that we don't chop the periphery. A temporal clear corneal section is made. If the astigmatism is plus at 90 degrees then the incision is made superiorly.

First of all, a needle with viscoelastic is injected inside the eye in the area where the second site is made (Figure 1). This will distend the eye so that when you make a

clear corneal incision, the eye will be tense and one can create a good valve. Now use a straight rod to stabilize the eye with the left hand. With the right hand make the clear corneal incision (Figure 2).

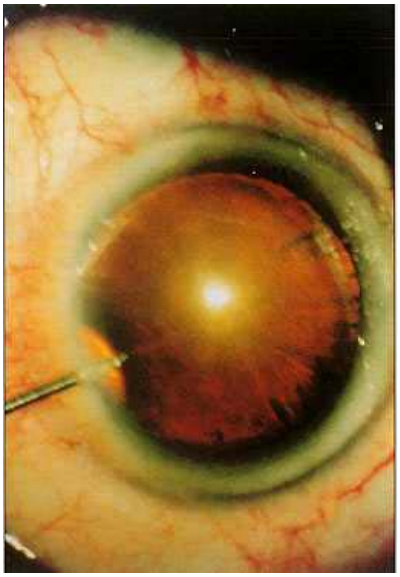

Figure 1- eye with cataract. Needle with viscoelastic entering the eye to inject the viscoelastic. This is the most important step in no anesthesia cataract /clear lens surgery. This gives an entry into the eye through which a straight rod can be passed to stabilize the eye. Note no forceps holds the eye

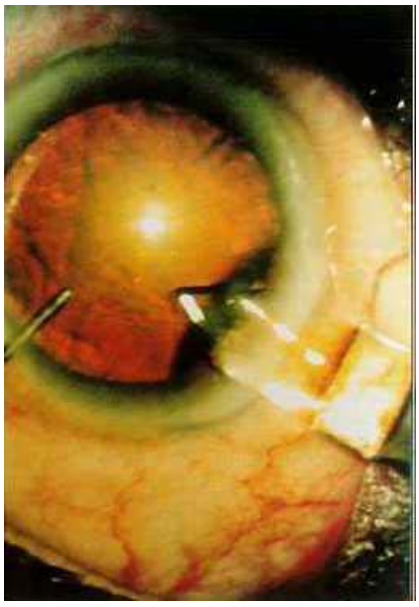

Figure 2- clear corneal incision. Note the straight rod inside the eye in the left hand. The right hand is performing the clear corneal incision. This is a temporal incision and the surgeon is sitting temporally.

When we started making the temporal incisions, we positioned ourselves temporally. The problem by this method is that, every time the microscope has to be turned which in turn would affect the cables connected to the video camera. Further the theatre staff would get disturbed between right eye and left eye. To solve this problem, we then decided on a different strategy. We have operating trolleys on wheels. The patient is wheeled inside the operation theatre and for the right eye the trolley is placed slightly obliquely so that the surgeon does not change his or her position. The surgeon stays at the 12'o'clock position. For the left eye the trolley with the patient is rotated horizontally so that the temporal portion of the left eye comes at 12'o'clock. This way the patient is moved and not the surgeon.

Rhexis

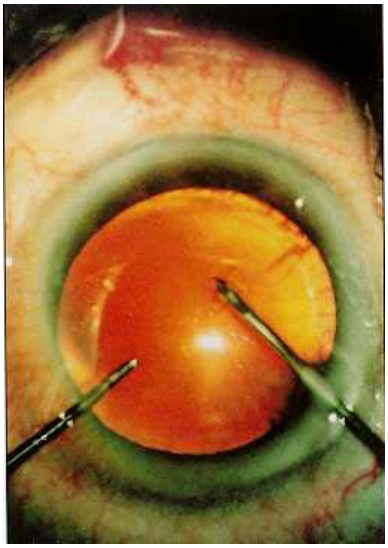

Figure 3- rhexis being done with a needle

Capsulorhexis is then performed through the same incision (Figure 3). While performing the rhexis it is important to note that the rhexis is started from the centre and the needle moved to the right and then downward. This is important because today concepts have changed of temporal and nasal. It is better to remember it as superior, inferior, right or left. If we would start the rhexis from the centre and move it to the left then the weakest point of the rhexis is generally where you finish it. In other words, the point where you tend to lose the rhexis is near its completion. If you have done the rhexis from the centre and moved to the left, then you might have an incomplete rhexis on the left-hand side either inferiorly or superiorly. Now, the phaco probe is always moved down and to the left. So every stroke of your hand can extend the rhexis posteriorly creating a posterior capsular rupture. Now, if we perform the rhexis from the centre and move to the right and then push the flap inferiorly- then if we have an incomplete rhexis near the end of the rhexis it will be superiorly and to the right. Any incomplete rhexis can extend and create a posterior capsular tear. But in this case, the chances of survival are better. This is because we are moving the phaco probe down and to the left, but the rhexis is incomplete up and to the right.

If you are a left handed person start the rhexis from the centre and move to the left and then down.

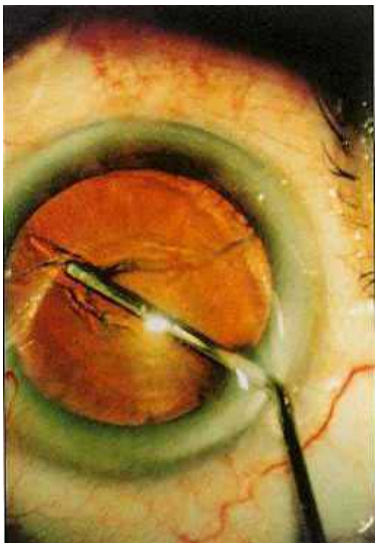

Figure 4- Hydrodissection

Karate chop- two halves

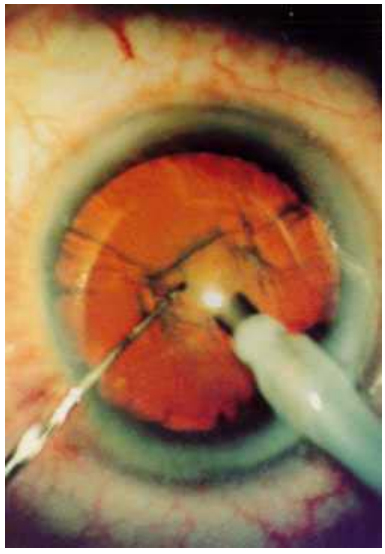

Figure 5- phaco probe placed at the superior end of the rhexis

Hydrodissection

Hydrodissection is then performed (Figure 4). We watch for the fluid wave to see that hydrodissection is complete. We do not perform hydrodilenation or test for rotation of the nucleus. Viscoelastic is then introduced before inserting the phaco probe.

We then insert the Phaco probe through the incision slightly superior to the centre of the nucleus (Figure 5). At that point apply ultrasound and see that the phaco tip gets embedded in the nucleus (Figure 6). The direction of the phaco probe should be obliquely downwards toward the vitreous and not horizontally towards the iris. Then only the nucleus will get embedded. The settings at this stage are 70% phaco power, 24 ml/minute flow rate and 101 mm of Hg suction. By the time the phaco tip gets embedded in the nucleus the tip would have reached the middle of the nucleus. We do not turn the bevel of the phaco tip downwards when we do this step, as the embedding is better the other way. We prefer a 15-degree tip but any tip can be used.

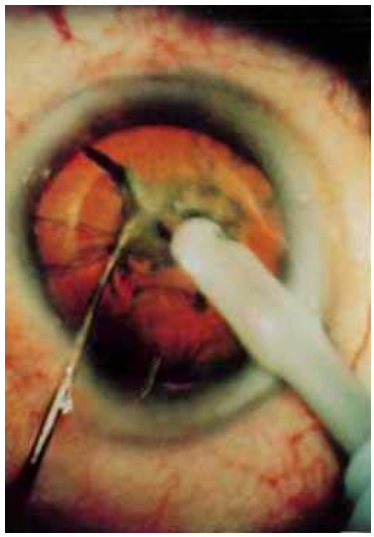

Figure 6- phaco probe embedded in the nucleus. We started from the superior end of the rhexis and note it has got embedded in the middle of the nucleus. If we had started in the middle then we would have embedded only inferiorly that is at the edge of the rhexis and chopping would be difficult.

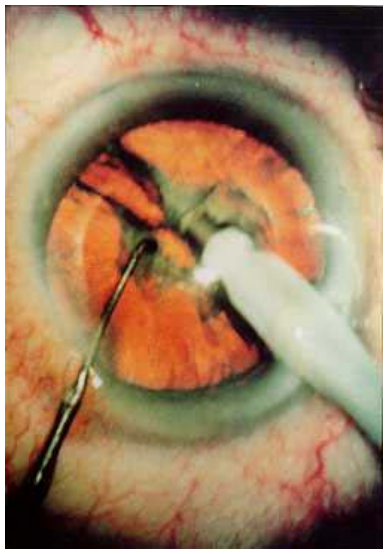

Figure 7- left hand chops the nucleus and splits like a laterally reversed l, that is downwards and to the left

Now stop phaco ultrasound and bring your foot to position 2 so that only suction is being used. Now lift the nucleus. When we say lift it does not mean lift a lot but just a little so that when we apply pressure on the nucleus with the chopper the direction of the pressure is downwards. If the capsule is a bit thin like in hypermature cataracts you might rupture the posterior capsule and create a nucleus drop. So when we lift the nucleus, the pressure on the posterior capsule is lessened. Now, with the chopper cut the nucleus with a straight downward motion (Figure 7) and then move the chopper to the left when you reach the centre of the

nucleus. In other words, your left hand moves the chopper like a laterally reversed L.

Once you have created a crack, split the nucleus till the centre. Then rotate the nucleus 180 degrees and crack again so that you get two halves of the nucleus. In brown cataracts, the nucleus will crack but sometimes in the centre the nucleus will still be attached. You have to split the nucleus totally in two halves and you should see the posterior capsule throughout.

Karate chop- further chopping

Figure 8- phaco probe embedded in one half of the nucleus. Go horizontally and not vertically as you have now a shelf of nucleus to embed. Chop and then split the nucleus

Now that you have two halves, you have a shelf to embed the probe. So, now place the probe with ultrasound into one half of the nucleus (Figure 8). You can pass the direction of the probe horizontally as now you have a shelf. Embed the probe, and then pull it a little bit. This step is important so that you get the extra bit of space for chopping. This will prevent you from chopping the rhexis margin. Apply the force of the chopper downwards. Then move the chopper to the left so that the nucleus gets split. Again, you should see posterior capsule throughout so that you know the nucleus is totally split. Then release the probe, as the probe will still be embedded into the nucleus. Like this create three quadrants in one half of the nucleus. Then make another three halves with the second half of the nucleus. Thus, you now have 6 quadrants or pie-shaped fragments. The settings at this stage are 50% phaco power, 24 ml/minute flow rate and 101 mm of Hg suction.

One should always remember 5 Words- Embed, Pull, Chop, Split and Release.

Pulse phaco

Once all the pieces have been chopped, take out each piece one by one and in pulse phaco mode aspirate the pieces at the level of the iris. Do not work in the bag unless the cornea is pre-operatively bad or the patient is very elderly. The setting at this stage can be Phaco power 50-30%, flow rate 24 ml and suction 101 mm of Hg.

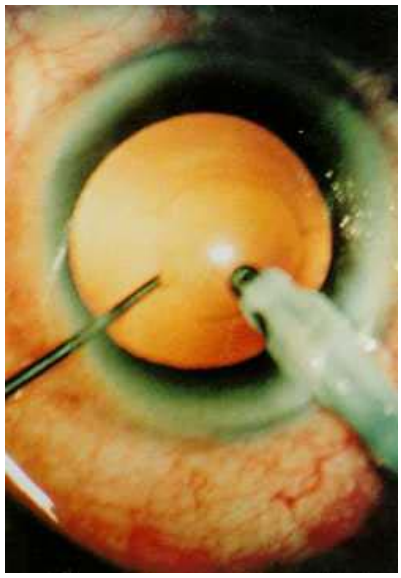

Figure 9- cortical aspiration completed. Note the straight rod in the left hand which helps control the movements of the eye

Figure 10- eye distended with viscoelastic. Note the rhexis margins

Cortical washing and foldable IOL implantation-

The next step is to do cortical washing (Figure 9). Always try to remove the subincisional cortex first, as that is the most difficult. In Figure 10 note the cortical aspiration complete. Note also the rhexis margins. Note also that every time the left hand has the straight rod controlling the movements of the eye. If necessary use a bimanual irrigation aspiration technique. Then inject viscoelastic and implant the foldable IOL. We use the plate haptic foldable IOL (Figure 11) with large fenestration's generally as we find them superior. Take

out the viscoelastic with the irrigation aspiration probe (Figure 12).

Figure 11- plate haptic foldable IOL with large fenestration being implanted

Stromal hydration
At the end of the procedure, inject the BSS inside the lips of the clear corneal incision (Figure 13). This will create a stromal hydration at the wound. This will create a whiteness, which will disappear after 4-5 hours. The advantage of this is that the wound gets sealed better.

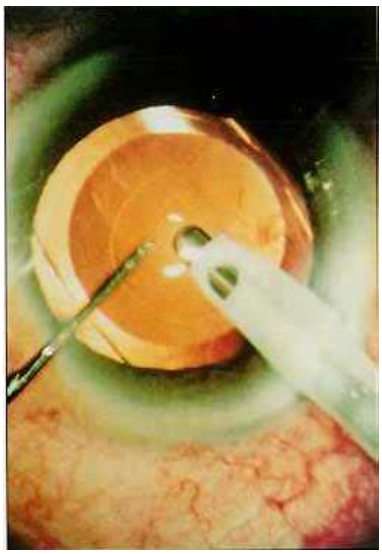

Figure 12- foldable iol in capsular bag. Viscoelastic removed with the irrigation aspiration probe

No Pad, S/C Injections-

No subconjunctival injections or pad are put in the eye. The patient walks out of the theatre and goes home. The patient is seen the next day and after a month glasses prescribed.

Figure 13- stromal hydration done and the case completed

No anaesthesia clear lens extraction:
In cases of clear lens removals, the same technique is followed. No anaesthesia is used. If one is not good then it is advisable to use a parabulbar anaesthesia (pinpoint anaesthesia) rather than a peribulbar block. The reason is that in such cases one could perforate the globe with the needle. Once the patient is draped, the syringe with viscoelastic is taken and the viscoelastic injected inside the eye using a 26-gauge needle. Then the temporal clear corneal incision is made. If the astigmatism is + at 90 degrees then a superior incision is made.

The rhexis is then done using a needle. This is followed by hydrodissection. The phaco probe is passed into the eye and using phaco aspiration the soft nucleus removed. One does not have to use ultrasound, as the nucleus in such cases is very soft. This is followed by cortical aspiration. Depending on the Biometry a foldable IOL is implanted in the eye. If the patient has high myopia and an IOL is not required then an IOL is not implanted. The authors have realized that chances of retinal detachment do not increase just because the eye is aphakic. The authors prefer to keep one eye emmetropic and the other slightly myopic to about 1 to 1.5 D so that the patient can see without glasses for distance and near with both eyes open.

Compared to Lasik this is a very good alternative, as Lasik does not help much in hyperopes and in high myopes (powers above –15 D).

Phacodynamics of the phaco chop technique
We should take full advantage of the phaco machines capability thereby decreasing physical manipulation of the intraocular tissues. In this phaco chop technique, we use a vacuum of 101 mm of Hg, about 70% phaco power and the flow rate is 24 ml/minute.

In this phaco chop technique, the most important is the vacuum, which needs to be sufficient to stabilize the nucleus while the chopper is splitting it. If the action of the chopper is dislodging the vacuum seal on the phaco tip, it is said that the vacuum can be raised from 120 to 200 mm of Hg. After embedding the phaco needle with mild linear ultrasound power in foot switch position 3, it is important to raise the pedal back to foot switch position 2, while the vacuum builds up. This is because the purpose of ultrasound was to completely embed the aspiration port into the nucleus to obtain good vacuum seal. In foot switch 3, there is risk of adverse heat build up because the occluded tip prohibits any flow of cooling. Also, when manipulating the nucleus by pulling with the embedded tip, the vacuum seal is likely to be compromised by the vibrating needle if it is in foot switch position 3.

Advantages

The phacoemulsification procedure has been proved to be reasonably safe to the endothelium. As compared to the "divide and conquer" technique, this phaco karate chop technique eliminates the need for trenching thereby producing significant reduction in phaco time and power consumed which in turn decreases endothelial cell damage. Even with increased density of cataract, there is a less pronounced increase in phaco time. Here we utilize the "Chop" to divide the nucleus by mechanical energy. It is safe and effective in nuclear handling during phacoemulsification.

In conventional chop, the disadvantage is that the chopper is placed underneath the anterior capsule and then pulled towards the centre. This can potentially damage the capsule and the zonules. In phaco chop, we don't go under the rhexis, the vertical element of the chopper remains within the rhexis margin and is visible at all stages. Hence very easy to work with even in small pupils or glaucomatous eyes. The stress is taken by the impacted phaco tip and the chopper rather than transmitting it to the fragile capsule.

By going directly into the centre of the nucleus with the phaco tip and not doing any sculpting, we don't need as much ultrasound energy as is usually required. It is safe and easy to perform and we don't have to pass as much balanced salt solution (irrigating fluid) through the eye.

Disadvantages

This technique demands continuous use of the left hand and hence requires practise to master it.

Topical anaesthesia cataract / clear lens surgery

All cases done by the authors were previously done under topical anaesthesia. 4% xylocaine drops were instilled in the eye about 3 time's 10-15 minutes before surgery. No intracameral anaesthesia was used. It is not advisable to use xylocaine drops while operating. This can damage the epithelium and create more trouble in visualization. No stitches and no pad are applied. This is called "the-no injection, no stitch, no pad cataract surgery technique". Now the authors have shifted all their cases 100 % to the No anaesthesia technique. This is done in both their hospitals in India (Chennai & Bangalore) and their hospital in Dubai (UAE).

No anaesthesia cataract / clear lens surgery

We had been wondering whether any topical anaesthesia is required or not. So we then operated patients without no anaesthesia. In these patients no xylocaine drops were instilled. The patients did not have any pain. It is paradoxical because we have been taught from the beginning that we should apply xylocaine. This is possible because we do not touch the conjunctiva or sclera. We never use any one-tooth forceps to stabilize the eye. Instead what we use is a straight rod which is passed inside the eye to stabilize it when we are performing rhexis etc. The first step is very important. In this we first enter the eye with a needle having viscoelastic and inject the viscoelastic inside the eye. This is done in the area of the side port. Now, we have an opening in the eye through which a straight rod can be passed to stabilize the eye. The anterior chamber should be well maintained and the amount of ultrasound power used very less. If you tend to use the techniques like trenching then the ultrasound power generated is high, which in turn generates heat. This causes pain to the patient. If you follow these rules one can perform no anaesthesia cataract or clear lens extraction surgery. It is not necessary to do this, as there is no harm in instilling some drops of xylocaine in the eye. The point that there is always a discussion which anaesthetic drop to use. It does not matter. The technique which you perform should not produce pain to the patient.

Blurhex (Trypan Blue) in mature cataracts

Various techniques are present which can help one perform rhexis in mature cataracts.

One should use a good operating microscope. If the operating microscope is good one can faintly see the outline of the rhexis.

Use of an endoilluminator. While one is performing the rhexis with the right hand (dominant hand), in the left hand (non-dominant hand) one can hold an endoilluminator. By adjusting the endoilluminator in various positions, one can complete the rhexis as the edge of the rhexis can be seen.

Use of a forceps. A forceps is easier to use than a needle especially in mature cataracts. One can use a good rhexis forceps to complete the rhexis.

Use of paraxial light

But with all these techniques, still one is not very sure of completing a rhexis in all cases. Many times if the rhexis is incomplete, one might have to convert to an extracapsular cataract extraction to prevent a posterior capsular rupture or nucleus drop.

The solution to this problem is to have a dye, which stains the anterior capsule. This dye is trypan blue (Blurhex)

One can inject Blurhex directly or first inject air into the anterior chamber. This prevents water-like dilution of

the Trypan blue. Then the Trypan blue is withdrawn from the vial into a syringe. This is then injected by a cannula into the anterior chamber between the air bubble and the lens capsule. It is kept like that for a minute or two for staining of the anterior capsule to occur. Next viscoelastic is injected into the anterior chamber to remove the air bubble and the Trypan blue.

Now, rhexis is started with a needle (Figure 14). One can use a forceps also. We prefer to use a needle as it gives better control on the size of the rhexis. Note the left hand holding a rod stabilizing the eye while the rhexis is being performed. The rhexis is continued with the needle. Note the contrast between the capsule, which has been stained, and the cortex, which is not stained. The rhexis is continued and finally completed (Figure 15). When the rhexis is complete, we can see the stained anterior capsule lying in the anterior chamber.

Air pump to prevent surge

One of the main bugbears of phacoemulsification is Surge[1]. The problem is that as the nuclear piece gets occluded in the phaco tip and we emulsify it, surge occurs. Many people have tried various methods to solve this problem. Some Phaco machines have been devised to solve this problem. Others have tried to use an anterior chamber maintainer to get more fluid into the eye. The problem with the anterior chamber maintainer is that another port has to be made. In other words now, we have three ports and if you are doing the case under topical or no anaesthesia (as we do in our hospital) it becomes quite cumbersome. Another method to solve surge is to use more of phacoaspiration and chop the nuclear pieces with the left hand (non-dominant hand). The problem by this is the surgical time decreases and if the case is of a hard brown cataract, phacoaspiration will not suffice.

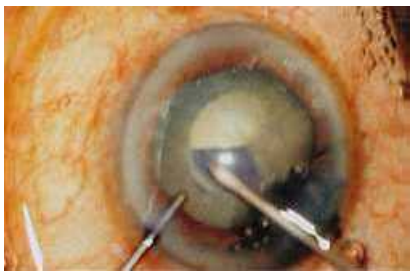

Figure 14- blurhex (trypan blue) used to stain the anterior capsule. Note the blue staining of the anterior capsule and the needle performing the rhexis

Surge occurs when an occluded fragment is held by high vacuum and is then abruptly aspirated with a burst of ultrasound. What happens is that fluid from the anterior chamber rushes into the phaco tip and this leads to a collapse of the anterior chamber.

Sunita Agarwal then thought of a method to solve surge using an air pump. We got this idea as when we were operating cases with Phakonit (a new technique in which cataract is removed through a 0.9 mm opening. We wanted more fluid entering the eye. Now we routinely use the air pump to solve the problem of surge.

Figure 15- rhexis completed. Note the white nucleus in the centre and the stained anterior capsule in the periphery

Method

First of all (Figure 16), we use two BSS bottles and not one. These are put in the IV stand.

Instead of using an IV set for the fluid to move from the Bottle to the phaco hand piece, we use a TUR set. This is Transurethral Resection (TUR) tubing set, which is used by urologists. The advantage of this is that, the bore of the tubing is quite large and so more fluid passes from the infusion bottle to the phaco hand piece. The TUR set has two tubes, which go into each infusion bottle, and then the TUR set becomes one, which then passes into the phaco handpiece.

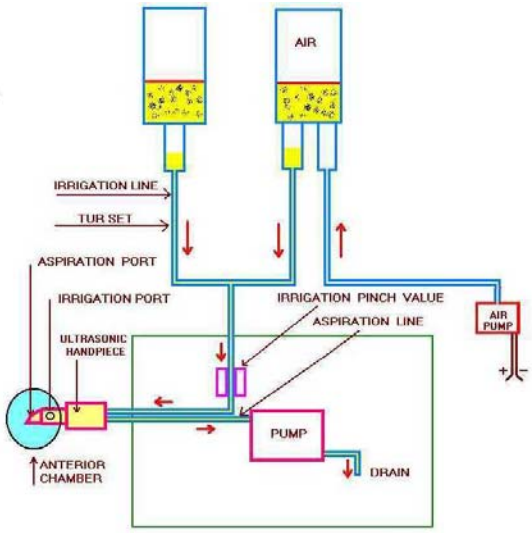

Figure 16- diagrammatic representation of the air pump and infusion bottle. Note two infusion bottles connected to a transurethral resection tubing (tur set). Also note the air pump connects to one of the infusion bottles

Now we take an air pump. This air pump is the same air pump, which is used in fish tanks to give oxygen to the fishes. The air pump is plugged on to the electrical connection.

An intravenous set now connects the air pump to the infusion bottle. The tubing passes from the air pump and the end of the tubing is passed into one of the infusion bottles.

What happens now is that when the air pump is switched on, it pumps air into the infusion bottle. This air goes to the top of the bottle and because of the pressure; it pumps the fluid down with greater force. With this, the

TUR set also is in place and so the fluid now flows from the infusion bottle into the TUR set to reach the phaco handpiece. The amount of fluid now coming out of the hand piece is much more than what would normally come out and with more force.

One can use an air filter between the air pump and the infusion bottle so that the air which is being pumped into the bottle is sterile.

This extra amount of fluid coming out compensates for the surge which would occur.

Conclusion

As in any other field, progress is inevitable in ophthalmology more so in refractive surgery. We have started to look on refractive surgery as a craft and should constantly try to improve our craft and become better every day. By this, we will be able to provide good vision to more people than any one dared dream a few decades ago. It also goes without saying that we are and will be forever grateful to all our patients because without their faith, we would never have had the courage to proceed.

Keeping this in mind, we hope and wish that the effectiveness and the advantages of this "No anaesthesia Clear lens extraction Technique" be realized and practiced thereby making the technique of phacoemulsification safer and easier providing good visual outcome and patient recovery.

References

1.Sunita Agarwal, Athiya Agarwal, Mahipal S Sachdev, Keiki R Mehta, I Howard Fine, Amar Agarwal: Phacoemulsification, Laser Cataract Surgery & Foldable IOL's; Second edition; Jaypee Brothers; 2000, Delhi, India

2.Athiya Agarwal, Sunita Agarwal, Amar Agarwal: No anesthesia Cataract surgery with the Karate chop technique; In Amar Agarwal's Presbyopia: A surgical textbook; Slack Incoporated 2002; USA; pages 177-185

3.Athiya Agarwal, Sunita Agarwal, Amar Agarwal: No anesthesia Cataract and clear lens extraction with Karate chop ; In Agarwal's Phako, Phakonit and laser Phako: A quest for the best; Highlights of Ophthalmology 2002; Panama; pages 113-120

4.Athiya Agarwal, Sunita Agarwal, Amar Agarwal: No anesthesia Cataract and clear lens extraction with Karate chop ; In Boyd-Agarwal's Lasik and beyond Lasik; Highlights of Ophthalmology 2001; Panama; pages 451-462

Publication of this Newsletter has been possible by a generous donation from

ABBOTT Laboratories Ltd
Abbott House
Norden Road
Maidenhead
Berkshire

A Survey of UK and Ireland based UKISCRS Members Practice

David Smerdon
Consultant Ophthalmic Surgeon
North Riding Infirmary, Middlesbrough, TS1 5JE, UK

Andre Welsh
Executive Director of ENTER
North Riding Infirmary, Middlesbrough, TS1 5JE, UK

Chris Dodds
Professor of Anaesthesia
Department of Anaesthesia
James Cook University Hospital, Middlesbrough, UK

Chandra Kumar
Consultant Anaesthetist
Department of Anaesthesia
James Cook University Hospital, Middlesbrough, UK

Abstract
A survey of the practice styles of members of the United Kingdom and Ireland Society of Cataract and Refractive Surgeons (UKISCRS) with a UK or Ireland postcode was performed in early 2001. A 79% response rate represented 199 members. The data was compared with the most recently reported similar surveys from the USA, Denmark and Japan.

Introduction
There have been surveys of the practice styles and preferences of American Society of Cataract and Refractive Surgeons (ASCRS) members since 1984 [1-2] and of Norwegian surgeons since 1996 [3-4] and in Japan since 1999 [5], however as yet there has been no similar survey of UK and Ireland cataract surgeons. UKISCRS is the United Kingdom and Ireland Society of Cataract and Refractive Surgeons. Ear Nose Throat and Eye Research (ENTER) the research foundation at the North Riding Infirmary in Middlesbrough acts as the secretariat for UKISCRS. With ENTER's help, the authors present the first questionnaire survey of UK and Ireland based UKISCRS members. We hope this will make an interesting yearly comparison to other surveys.

Materials and Methods
In the early part of 2001, the authors formulated a series of questions about cataract surgical technique, cataract anaesthesia, intraocular lenses and biometry. The authors piloted an initial questionnaire locally to ophthalmologists at the North Riding Infirmary in Middlesbrough, and then modified it in light of the answers. The modified questionnaire was sent to all UKISCRS members with either a UK or Ireland postcode. We numbered the questionnaires so that a second wave could be sent to those who did not reply, however we maintained confidentiality. Data was entered onto MS Access and then analysed using MS Access and Excel.

Results
There were 252 UKISCRS members with either a UK or Ireland postal code. We received 199 completed questionnaires, a response rate of 79%. Five respondents were excluded; three did not perform cataract surgery, one was an ophthalmic veterinarian and one had retired from surgical practice. The majority of the responses are based on 194 returned questionnaires. Cataract surgery was declared the main special interest of 56% of respondents. Two respondents (1%) performed only extracapsular surgery, 15% performed a mixture of phacoemulsification and extracapsular surgery (the majority of these said that they performed ten extracapsulars per month) and the rest, 84% performed only phacoemulsification cataract surgery.

Table 1 shows the number of cataract operations performed personally by UKISCRS members in a month. This ranged from 10 to over 80.

Number of cataract procedures per month	*Respondents*	*Percentage*
10	8	4.12
20	18	9.28
30	39	20.1
40	43	22.16
50	46	23.71
60	17	8.76
70	10	5.15
80	1	0.52
>80	10	5.15

One hundred and thirty three reported that their hospital has a day cataract unit.

Clear corneal incisions were most common (64%) followed by anterior limbal (18%). The location of the cataract incision was superiorly regardless of astigmatism in 31% and at the steepest keratometry reading in 29%. The most common phacoemulsification technique was the four quadrant divide and conquer (57%), followed by chopping (18%). Most respondents (90%) used a sutureless technique.

Peroperative fluids were used as follows: post-operative injectable antibiotics (72%), post-operative injectable steroids (48%), pre-operative non-steroidal anti-inflammatory agents (23%), pre-operative drops (21%), antibiotics in the irrigating solution (14%) and intraocular miotics (5.7%). Interestingly 14% do not use any antibiotic and 57% use post-operative antibiotics only.

Table 2. Summary of anaesthetic techniques used by responding UKISCRS members. Column 2 shows number of members who use the technique. Column 5 shows responding members' most commonly used techniques.

	Performed at all			*Most commonly performed*	
Anaesthetic technique	***No***	***%***	***Comments***	***No***	***%***
Retrobulbar	7	3.6	1 used only this technique	6	3.1
Retrobulbar + VII	15	7.7	1 used only this technique	2	1
Peribulbar	123	63.4	7 used only this technique	70	36
			7 used this technique and GA		
Retro-peribulbar	33	17	4 used only this technique	8	4.1
			2 used this technique and GA		
Sub-Tenons	113	58.2	8 used only this technique	54	28
			8 used this technique and GA		
Subconjunctival	23	11.9	2 used this technique and GA	5	2.6
Topical only	71	36.6	2 used only this technique	12	6.2
			1 used this technique and GA		
Topical with intracameral lidocaine	66	34	1 used only this technique	30	16
			4 used this technique and GA		
General Anaesthesia	116	59.8		3	1.5
No answer	0	0		4	2.1

The most commonly used visco-elastic agent was Healon (41.75%). This was used three times more commonly than any other visco-elastic. There were thirteen other visco-elastics used. Combinations of visco-elastics were used by 12.4%. HPMC was used by 6.7%. A number of respondents stated that they were unable to use the visco-elastic of choice due to budgetary controls.

The most commonly used implant material was hydrophobic acrylic (38%) followed by silicone (32.8%), hydrophilic acrylic (13%) and PMMA (7.8%). The most common lens construction was assembled (58%) followed by one piece non-plate (20.5%) and one piece plate (10%). The most common optic size was 6 mm (44.5%) followed by 5.5 mm (32%), 5 mm (11.5%) and then small numbers of others. The vast majority of lenses used were round (93%). Just 8% of respondents routinely use multifocal lenses.

Biometry was routine for 94% of respondents, however 2 respondents said that they did not use biometry. The SRK-T formula was the most common overall for all ranges of axial length. It was used slightly less for hyperopes (42%) than in the mid-range axial lengths (62.89%) and in myopes (63.4%). For all ranges, 42% still used the SRKII formula and 2.06% still used the SRK formula. There was some evidence of a move to the Hoffer Q formula for hypermetropes (16.49%). Seventy percent of respondents were routinely informed of the postoperative refractive results at the surgery, 50.5% kept a record of the refractive results and 48.5% fed back results to their biometry service.

Ophthalmic local anaesthesia was most commonly given by an anaesthetist (52.5%) followed by an ophthalmologist (28%) and non-medically qualified people (3.1%). The remaining respondents either did not answer or ticked more than one option. Twenty-nine percent stated that they gave routinely local anaesthetic without dedicated anaesthetist cover.

Table 3. Comparison of summary data with other reported surveys

	ENTER	***Leaming 2000***	***Hansen 1999***	***Oshika***
Phaco 0nly	84	73	-	-
Phaco preferred	-	-	97	92
ECCE only	1	3	3	4
Antibiotics				
in irrigation	14	27	-	-
pre op drops	21	79	-	-
subconjuctival	72	20	29	-
S/C steroid	48	17	30	-
NSAIs pre op	26	43	-	-
Incision				
superior	31	26	41	-
Temporal	15	55	11	-
oblique	14	11	33	-
Vary with Ks	29	8	15	-
Clear corneal	64	47	13	14
No suture	90	86	79	-
Technique				
Divide & conquer	68	67	-	-
chopping	18	22	-	-
IOL material				
PMMA	8	15	65	2
Acrylic (phobic)	38	} 52	} 28	} 60
Acrylic (philic)	13			
silicone	33	25	7	8
IOL type				
1 piece plate	10	12	-	-
1 piece non plate	20	29	-	-
assembled	54	58	-	-
IOL optic size				
>6mm	4	-	-	33
6mm	44	-	22	43
5 - >6mm	44	-	76	48
<5mm	0.50%	-	-	-
Round optic	94	-	-	-
Multifocal use	14	Interest	-	-

We asked which techniques were used for cataract anaesthesia in the member's practice. The results are given in figure 2 with peribulbar, Sub-Tenon's and general anaesthesia figuring highly. We then asked for the most commonly used anaesthetic technique and the results of this are summarised in figure 3. This shows that the most common anaesthetic technique for cataract surgery in UKISCRS members is peribulbar (36.1%) followed by Sub-Tenon's (27.8%) topical (21.65%).

General anaesthesia (1.5%) was the most common technique for three respondents.

Table 4. Extrapolation of monthly cataract numbers to numbers on an operating list. Mean is 42.86 cases per month. ***Assuming that the average UKISCRS member has 2 OR sessions per week (8.66 lists per non-leave month) the extrapolation is that there is an average of 4.8 cases per OR session.***

Number per month	*No of cases per list*	*Respondents*	*Percentage*
10	1.16	8	4.12
20	2.31	18	9.28
30	3.46	39	20.1
40	4.62	43	22.16
50	5.76	46	23.71
60	6.92	17	8.76
70	8.07	10	5.15
80	9.23	1	0.52
>80	>9.23	10	5.15

Sedation was rarely used (4.2%). Monitoring during local anaesthesia was most commonly by pulse oximetry (47%), verbal contact (32.5%), ECG (23.6%) and BP (18.3%). Forty-seven percent of respondents used all the above to monitor patients. Pulse only was used by 4.7%.

We asked UKISCRS members "Do you perform non-cataract refractive surgery?" and 36% said that they did. We asked "Should non-ophthalmologists be trained to perform cataract surgery?" and just 3% thought that this was appropriate.

Discussion

There are a number of reported surveys of practice styles from the United States, Denmark and Japan. Direct comparisons between the groups are difficult; however there are some obvious trends. We compared our results with the most recent surveys of Leaming, Hansen and Oshika. The results are summarised in table 2. Most UKISCRS members are using a sutureless phacoemulsification technique and a very high proportion (84%) performs only phacoemulsification for cataract surgery. One percent of respondents in this survey perform only extracapsular surgery compared to Leaming's (3%) and Oshika's survey (4%). A higher proportion of UKISCRS members operate on axis than in the other surveys and more use a sutureless corneal section. There is a comparable rate of nucleo fractis technique with Leaming's survey. UKISCRS members use antibiotics less frequently in the irrigation solution and Danish surgeons use antibiotic drops pre-operatively far less. Approximately twice the percentage of ASCRS use non-steroidal anti-inflammatory agents pre-operatively than their UKISCRS colleagues, however twice the percentage of British cataract surgeons use post-operative injectable steroids than their ASCRS colleagues.

Acrylic lenses are preferred by 60% in Japan, 57% in USA, 51% in UK and Ireland and 28% in Denmark. Of the UKISCRS members who responded, 8% had inserted multifocal implants. A direct comparison with Leaming's survey, which only talks about interest in multifocals is not possible. UKISCRS and ASCRS members' preferences for the style of lens are very similar.

In our survey we looked in detail at anaesthetic technique. Our survey shows that Sub-Tenon's anaesthesia is now the second most commonly used cataract anaesthetic technique. We asked "What anaesthetic techniques are used on your cataract surgery patients?" The answers gave a hierarchy of peribulbar, general anaesthesia, Sub-Tenon's anaesthesia, topical and topical with intracameral lidocaine. This suggests that general anaesthesia is the second most common technique. It is not. When we asked which was the most commonly used technique, we found a different hierarchy of peribulbar, Sub-Tenon's, topical, topical plus, and general anaesthesia. Most UKISCRS members do the majority of their work under the local anaesthetic technique of their choice. For a number of difficult cases (perhaps one in 50 or so) most will use general anaesthesia. We have to be asking the right questions.

Our questions on biometry are timely, because within the last twelve months the Royal College of Ophthalmologists[6] has issued guidance on recommended formulas to use for biometry. We were frankly astonished that two respondents said that they did not perform biometry for cataract surgery. There were a small number of respondents using out-moded formulae. Just three respondents used the College's recommended formulae in all ranges. It would be interesting to see if in a year biometry practice changes in light of the guidance from the Royal College of Ophthalmologists.

Given that UK ophthalmologists are being pressurised to perform more cataract operations with seven or eight cataracts per 3½ hour operating session being regarded by the activists as being the norm, we made an attempt to extrapolate from our figures the average number of cataracts performed by UKISCRS members. Our questionnaire asked for the number of cataracts performed per month. The results and our extrapolations are shown in table 3. The average number was 42. We made a number of assumptions. We assumed that each UKISCRS member has two operating sessions, which is the norm in a UK consultant contract. We assumed that members reported the number of cataracts performed in a working month (i.e. no leave). Given those assumptions, the average number of cataracts per operating list is 4.8. We estimate that we could be out by upto one fifth with these estimates. This estimation takes no account of private work undertaken outside of the NHS hospital. If members included these, the average could be much lower. It is interesting and revealing to find that in a Society at least in part dedicated to cataract surgery we found that on average UKISCRS members probably perform less than five cataracts per operating session (3½ hours). Only twenty-seven of the UKISCRS

membership suggested that they performed over 7 cataracts per operating session.

Our response rate was good at 79% and gives us confidence that we are representing the majority of UKISCRS in this survey. We are well aware of the problems with this type of survey. The sample population will change from year to year, so we can do no more than report trends. We need to ask the right questions without ambiguity. Extrapolation would then be unnecessary. This survey does highlight some interesting trends and we look forward to making comparisons with future surveys.

References

1 Leaming DV. Practice styles and preferences of ASCRS members - 1985 survey. J Cataract Refract Surg 1986; 12: 380-384

2 Leaming DV. Practice styles and preferences of ASCRS members - 2000 survey. J Cataract Refract Surg 2001; 27: 948-955

3 Hansen TE. Practice styles and preferences of Danish cataract surgeons – 1995 survey. Acta Ophthalmol. Scand 1996; 74: 56-59

4 Hansen TE. Current trends in cataract surgery in Denmark – 1998 survey. Acta Ophthalmol. Scand 1999; 77: 685-689

5 Oshika T, Amano S, Araie M et al. Current trends in cataract and refractive surgery in Japan: 1997 survey. Jpn J Ophthalmol 1999; 43: 139-147

6 Royal College of Ophthalmologists. Guidelines for cataract surgery

Ophthalmic Anesthesia Society 16th Annual Scientific Meeting – Chicago, October 2002

Robert Johnson
Past President BOAS, Bristol

The name 'Windy City' for Chicago refers to verbose politicians rather than the weather. However, the first day of the meeting was accompanied by gale force winds and torrential rain. Fortunately those that control such things smiled upon us the next day and we had a beautiful evening for a dinner cruise on Lake Michigan. This was a departure for OAS as normally American conferences are not accompanied by this traditional British event. The views of the city from the lake were superb as was the ambience: I think the event was much enjoyed by all.

The meeting was well attended and the programme design and organization were, as ever, good. Christine Moore and I were the only U.K. delegates this year but were made to feel very welcome – neither of us were backward in coming forward with discussion and comment! The cost of the hotel, while perhaps normal for a good hotel in a big city, was very high. Next year I may well use the internet to find a hotel room that is within fifteen minutes walk but less expensive – a retrospective search showed this to be quite possible. I suspect that our difficulties with study leave budgets will persist making such an exercise worthwhile.

Also, Chicago has such a wealth of museums, concert venues, restaurants and galleries, not to mention architecture, that an extra day before or after the meeting is highly desirable. It is an exciting city and one feels remarkably secure using just basic common sense.

David Hunter from Boston gave an erudite discussion of the cause and effects of ocular motility problems following orbital regional anaesthesia. The message is that needles and cannulae (yes, sub-Tenon's anaesthesia may cause such problems) should be kept away from muscles preventing physical trauma or intramuscular injection. Not all recover spontaneously and careful assessment is essential. Later in the programme, Bruce Carlson described the characteristics and behaviour of extraocular muscle and changes with ageing. Where local anaesthetic myotoxity is concerned, the human definitely has the advantage over some other animals – I would certainly recommend general anaesthesia for cataract extraction in rats. Little work has been undertaken on ageing of human extraocular muscles but it seems at least likely that regeneration after damage may be impaired in the elderly.

Your BOAS past president discussed a number of cameos relating to ophthalmic anaesthesia in Europe. He was indebted to his own department for an audit of orbital regional anaesthesia record keeping and compliance with College guidelines and to Emile Calenda from Rouen for provision of data regarding anaesthetic practice in his hospital. The pterygopalatine ganglion block (as of Russia) was explored with a detailed study of relevant anatomy. The duration of training of anaesthetists in the U.K. raised some eyebrows and one nurse anesthetist said that such training was over the top for anesthesia as most was given by nurses in the USA! It is very clear that differences between our systems are quite considerable but both have strengths (and weaknesses). The talk ended with a discussion of the virtues of open draping preventing both claustrophobia and carbon dioxide retention and, somehow, this all got muddled up with Shakespeare and why we operate in theatres. Christine Moore presented a poster discussing intraocular bleeding following sub-Tenon's local anaesthetic block. It was well received and should encourage us to prepare more posters for this meeting.

There were excellent workshops on anatomy (Gary Fanning) and anterior sub-Tenon's anaesthesia (Scott Greenbaum). Helen Li from Galveston spoke on sub-Tenon's for posterior segment surgery using 11 ml of injectate. Not surprisingly this provoked discussion. However the size of the series described and the outcomes were impressive – on the whole. Nine and one half percent required 'significant intravenous medication'. There was an excellent report of a survey of safety of continued anticoagulation therapy in cataract surgery from Don Hirschman and Lesa Morby and Roy Hamilton described the evolution of a safe and effective technique of Regional Orbital Anaesthesia.

We heard other excellent presentations and discussion was lively and productive. It was a delight that Bob Hustead was present and we all enjoyed and benefited from his contributions. On a sad note, he reported the recent death of his great friend and colleague Leo Koornneef who had undertaken such superb work on the anatomy of the orbit and had given of his time so freely to those wishing to better understand the subject. He certainly gave me enormous assistance when I was writing chapters on the subject.

A truly worthwhile meeting with a delightful and enthusiastic atmosphere in a city which, while is expensive, it exciting and has 'quality'.

News and information

World Congress of Ophthalmic Anaesthesia

World Congress of Ophthalmic Anaesthesia will be hosted by BOAS on 15-16th April 2004 in the premises of the Royal College of Physicians, London. Full details will be available on BOAS Website www.boas.org

Progress on the Joint Colleges Working Party Report

The document Joint Colleges Guidelines of the Royal Colleges of Anaesthetists and Ophthalmology was published in 2001. The full document can be accessed by visiting www.rcoa.org or www.boas.org

No subscription for retired members

Retired members do not need to pay the annual subscription fee.

Income Tax Rebate to Society Members

BOAS is registered with Her Majesty's Inland Revenue for the purposes of Corporation Tax. Members can claim income tax allowance against the BOAS subscription.

Contribution for the 8th issue

The next Newsletter will be published in April 2003. Please send your articles or any contributions for inclusion in the Newsletter by 15th March 2003 to Dr Chandra Kumar, Secretary BOAS, James Cook University Hospital, Middlesbrough TS4 3BW, UK or email secretary@boas.org

Subscription to Journal of Cataract and Refractive Surgery

Anaesthetist members of BOAS can receive the journal at a discounted rate of £65 by writing to Andre Welsh, Director ENTER, North Riding Infirmary, Newport Road, Middlesbrough.

Acknowledgement

BOAS office is grateful to Mr Stephen Moore, Information Officer and Mrs Pat McSorley(School of Anaesthesia), James Cook University Hospital, Middlesbrough for valuable help in the production of the Newsletter.

Reasons for 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

Membership of BOAS includes 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 banker's 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

Administrative Office and Membership information from

Dr Chandra M. Kumar
Secretary, BOAS
James Cook University Hospital
Middlesbrough
TS4 3BW, UK
Tel 01642 854601
Fax 01642 854246
Email cmkumar@boas.org
Web address http://www.boas.org

Change of address

Members are advised to inform the secretary if there is a change of email or postal address.

BOAS Executive Committee

President
Prof. Chris Dodds

President Elect
Mr. Ken Barber

Secretary
Dr. Chandra M Kumar

Treasurer
Mr Tim C Dowd

Council Members
Dr. Caroline Carr
Mr. Louis Clearkin
Mr Tom Eke
Dr. David Greaves
Dr. Monica Hardwick
Dr Stephen Mather
Dr. Anthony P Rubin
Mr. David Smerdon
Dr Guri Singh Thind
Dr. Sean Tighe

British Ophthalmic Anaesthesia Society Member Registration Form

To The Branch Manager Midland Bank

STANDING ORDER MANDATE

Postal Address……………………………………………………………………………………

Please Pay	Bank: **Midland Bank**	Branch Title (not address): **South Cleveland Hospital Branch**	Sorting Code Number:
for the credit of	Beneficiary's Name: **British Ophthalmic Anaesthesia Society**	Account Number:	Quoting Reference:
the sum of	Amount: **£25.00**	Amount in words: **Twenty Five Pounds**	
commencing	Date of first payment:	and thereafter every — Due date and frequency: **Yearly**	until further notice in writing or — Date of last payment: — and debit my/our account accordingly

PLEASE CANCEL ALL PREVIOUS STANDING ORDER/ DIRECT DEBIT MANDATES IN FAVOUR OF	UNDER REFERENCE NUMBER

Account to be debited	Account Number

Special instructions

Signature(s)………………………………………………… ……………………Date……………

Banks may decline to accept instructions to charge Standing Orders to certain types of account other than Current Accounts

NOTE: The Bank will not undertake to
a) make any reference to Value Added Tax or pay a stated sum plus V.A.T., or other indeterminate element.
b) advise remitter's address to beneficiary.
c) advise beneficiary of inability to pay
d) request beneficiary's banker to advise beneficiary of receipt.
e) accept instructions to pay as soon after the specified date as there are funds to meet the payment, if funds not available on the specified date.

Payments may take 3 working days or more to reach the beneficiary's account. Your branch can give further details.

Personal details

Last name (Dr, Mr, Mrs, Miss, Ms)…………………………………………………

First Name……………………………………………………………………………………
Department…………………………………………………………..Institution……………………
Address……………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………
City/County/……………………………………Post
code……………………………………………………………

Phone………………………..Fax…………………………Email………………………………………

If you would like to become a member of the British Ophthalmic Anaesthesia Society, please complete the bank standing order and your personal details.

Completed form should be sent to:-

Dr. Chandra M Kumar
Secretary, BOAS
Dept. of Anaesthesia
James Cook University Hospital
Middlesbrough TS4 3BW, UK

BOAS 2003

5TH ANNUAL SCIENTIFIC MEETING

Chester Grossvenor Hotel

28TH AND 29TH JUNE 2003

Overseas Speakers

Programme includes

Anatomy

Workshop

Techniques

General Anaesthesia

Local Anaesthesia

Freepapers

Posters

Prizes

CONTACT:
Dr Sean Tighe
Email: sean_tighe@msn.com

Consultant Anaesthetist
Countess of Chester Hospital
Liverpool Road, Chester, UK

Full details: visit our website: **www.boas.org**

Standing order BOAS Members

Dr. Mark Adams, SHEFFIELD
Dr Kursh Ahmed, MONK FRYSTON, N. YORKS
Dr David J. Allan, WIGAN
Dr. Sandip Amin, LONDON
Dr. Tarek A.A. Ammar, WAKEFIELD
Dr. Moses M. Ankutse, DERBY
Dr. Rebecca Aspinall, BRISTOL
Dr. Ramesha Avatgere, STOKE ON TRENT
Mr K. Barber, WORCESTER
Dr. Phillip Barclay, LIVERPOOL
Dr. Frederick Barton, KINGSTON UPON THAMES
Dr. M. Bayoumi, MID GLAMORGAN
Dr. Joy Beamer, STRATFORD UPON AVON
Mr Michael Andrew Bearn, CARLISLE
Dr. N.C. Bhaskaran, CRANBROOK, KENT
Dr. Alistair Brookes, COVENTRY
Dr. Alison Budd, LONDON
Dr Mike Burbidge, BEDFORD
Dr Caroline Carr, LONDON
Dr. Somnath Chatterjee, SOLIHULL
Dr Surinder Pal Singh Cheema, HUDDERSFIELD
Dr. Donald Child, YORK
Dr Falguni Choksey, WARWICK
Dr Bret Claxton, BINGLEY, W. YORKS
Mr Louis Clearkin, WIRRAL
Dr. Nicholas Coker, ROMFORD
Dr. John H. Cook, EASTBOURNE
Mr Stuart Cook, BRISTOL
Dr. Ian M. Corall, LONDON
Dr. David Cranston, HERTS
Dr. Damien Cremin, PONTYCLUN
Dr. Simon Crighton, WARWICK
Dr Steven Cruickshank, NEWCASTLE UPON TYNE
Dr D.J. Dalgleish, DORSET
Dr Darren Daniels, SUTTON COLDFIELD
Dr Allan Dark, BUCKS
Dr. Narinder Dhariwal, SUNDERLAND
Dr. Mary Dickson, EDINBURGH
Dr Christopher Dodds, MIDDLESBROUGH
Dr. Andrei Dombrouski, SLOUGH
Mr Timothy Dowd, MIDDLESBROUGH
Dr. Janet Downer, LONDON
Dr. Maurice Dunstan, LONDON
Dr Subhasis Duttagupta, TRURO
Dr. Karen Eagland, BIRMINGHAM
Dr. Tom Eke, NORFOLK
Mr. Mamdouh El-Naggar, MIDDLESBROUGH
Dr Yasser Elhattab, KENT
Miss Christine Ellerton, MIDDLESBROUGH
Dr Ruth Eustace, DERBYSHIRE
Dr Kevin Evans, SOLIHULL,
Dr Alberto Affonso Ferreira, SP BRAZIL
Dr. Frances Forrest, BRISTOL
Dr. Angus Fraser, CONWY
Dr. Ged Furlong, CHELTENHAM
Dr Ged Furlong, CHELTENHAM
Dr Sharon Goh, BARNSLEY
Dr Harold Leslie Gordon, MERSEYSIDE
Dr John David Greaves, NEWCASTLE UPON TYNE
Dr. Jonathon Griffiths, CARDIFF
Dr. Kevin Haire, LONDON,
Dr John Halshaw, NEWCASTLE UPON TYNE
Dr. Farquahar William Hamilton, DUNDEE
Dr. Monica Hardwick, WORCESTER
Dr. Michael Hargrave, SURREY
Dr Christopher Heaven, WIGAN
Dr Babak Hedayati, WIRRAL
Dr Pamela Ann Louise Henderson, BRADFORD
Dr. Miles Holt, WARWICKSHIRE
Dr. Peter Hooker, NEWCASTLE UPON TYNE
Dr R.B.S. Hudson, DERBY
Dr. Elizabeth Hunt, BIRMINGHAM
Dr Farah Idrees, READING,
Dr. Peter James, BASINGSTOKE, HANTS
Dr G.T. Jayaram, MERSEYSIDE
Dr. Shankaranand Jha, SCUNTHORPE,
Dr. Robert W. Johnson, BRISTOL
Dr Ruth M. Jones, CAMBRIDGE
Dr Prashant Shivaji Kakodkar, NORTHAMPTON
Dr. Gareth Kessell, MIDDLESBROUGH
Dr Reshma Khopkar, READING
Dr. Ivor John Kirby, SOUTHPORT
Dr M.S. Kokri, MIDDLESBROUGH
Dr. K.L. Kong, BIRMINGHAM
Dr Somasundaram Krishnamoorthy, COVENTRY
Dr. Chandra M. Kumar, MIDDLESBROUGH
Dr Eva Marie Lang, LUTON
Dr. Morag Lauckner, NEWCASTLE UNDER LYME
Dr. David Laws, NEWCASTLE UPON TYNE
Dr Mun Seng Lee, MIDDLESBROUGH
Dr Konstantin Levshankov, CHESHIRE
Dr. Stephen Robert Littler, LONDON
Dr. Bernard Logan, LONDON
Dr. Jonathan Lord, LONDON
Mrs Evelyn Low,
Dr. Oxana Maher, DEWSBURY, W. YORKS
Dr. Anne Marczak, WOLVERHAMPTON
Dr Stephen J. Mather, BRISTOL
Dr. Elamma Mathew, WAKEFIELD, WEST YORKS
Mrs. Shelagh Mayer, MANCHESTER
Dr Christine McBeth, CARDIFF
Dr. Kelly McDaid, LONDONDERRY
Dr Hamish A. McLure, LEEDS
Dr Bartley McNeela, MIDDLESBROUGH
Dr. Mani Mehta, MIDDLESBROUGH

Dr Carl Michael Hugh Miller Jones, KENT
Dr. Brian Milne, DONCASTER
Dr Andrew Mitchell, BIRMINGHAM
Dr. Christine Moore, LONDON
Dr Georgios Moutsianos, WOLVERHAMPTON
Dr Manian Murali-Krishnan, NORTHAMPTONSHIRE
Dr Durai Muthuswamy, CARDIFF
Dr. Rajasekharan Nair, KEIGHLEY
Dr Tom Neal, BIRMINGHAM
Dr. Fiona Nicholls, LONDON
Dr. James Nickells, LONDON
Dr Claudia Paoloni, BRISTOL,
Dr. Pinakin Patel, STANMORE, MIDDLESEX
Dr Maria Pomirska, CAMBRIDGESHIRE
Dr. Simon Poulter, MID GLAMORGAN
Dr. Sarah Powell, WEST SUSSEX
Dr Allan Badgett Powles, LINCOLN
Dr. Nicholas Pritchard, SURREY,
Dr. Edward Andrew Proctor, MARGATE, KENT
Dr. John Prosser, WORCESTER
Dr Saratha Rajah, HERTS
Dr Ramakrishnarau Rebbapragada, MIDDLESEX
Dr Raju Reddy, BIRMINGHAM
Dr. David Leetham Robinson, SURREY
Dr. M.J. Rooney, DORRIDGE, SOLIHULL
Dr. Alison Ross, ABERDEEN
Dr. Anthony P. Rubin, LONDON
Dr. Heinrich Ruschen, ESSEX
Dr. David M. Ryall, MIDDLESBROUGH
Dr. John Sale, BUCKS
Dr. Sandeep Saxena, LEEDS LS15 4AU
Dr. S.J. Seddon, STOKE ON TRENT
Dr. Lalith Sekhar, SUNDERLAND
Dr. R. Sharawi, GRASBY,
Dr. Zahid Sheikh, YORK
Dr. Fatehsingh Shekhawat, COVENTRY
Dr. Roger Slater, MANCHESTER
Mr David Smerdon, MIDDLESBROUGH
Dr. Peter Stoddart, BRISTOL
Dr. Peter Sweet, WORTHING
Dr Andy Taylor, NOTTINGHAM
Dr Evelyn Taylor, BUCKS
Dr Ian Robert Taylor, HANTS,
Dr Gurvinder Thind, LIVERPOOL
Dr. Malcolm Thompson, LONDON
Dr. Sean Tighe, CHESTER
Dr Thelma Tipping, VALE OF GLAMORGAN
Dr Michael Twohig, BRIGHTON
Dr Ashwinkumar Liladhar Vaidya, LANCASHIRE
Dr Andrei Varvinski, TORQUAY
Dr Sashi Bala Vohra, BIRMINGHAM
Dr Anthony Christopher Wainwright, SOUTHAMPTON
Dr. L.M. Walton (Hardie), DUNDEE
Dr. Duncan Weir, EDINBURGH
Dr. Emert White, WARWICK
Dr. A.D.B. Williamson, SUTTONCOLDFIELD
Dr Sean Williamson, MIDDLESBROUGH

One Year Members

Dr Arun Acharya, Fareham
Dr Perihan Ali, Leicester
Dr John Azami, Bonvilston
Dr Susan Bailey, Epsom
Dr Janet Barrie, Royal Oldam Hospital
Dr Maureen Bassilil, Epsom
Dr Caroline Bates, Breaston
Dr Roger Botha, Dudley Road
Dr Alison Brake, Off Tythebarn Lane
Dr Graham Bruce, Oatley Nsw
Dr Paul Buckoke, Leigh-On-Sea
Dr David Bukht, Holyport Maidenhead
Dr Malcolm Calhaem, Staffs
Dr Val Carr, London
Dr Jonathon Coghill, Tavistock
Dr Jillian Cressey, Northampton
Dr Simon Crighton, Leek Wooton
Dr Robert Cruickshank, Leeds
Dr Luisa Cruz Teixeira, 429 5 Ea
Dr Mary Daniels, Royal Cornwall Hospital
Dr Zahy Dimitry, Standish
Dr Hussein El-Abiary, Bournmouth
Dr David Elcock, Exford Green
Dr Julia Ely, Harbourne
Dr Bahgat Eshak, Romsey Road
Dr Luigi Flackett, Worcs Royal Hospital
Dr Helen Garston, Selly Oak
Dr Pardeep Gill, Beeston
Dr Magdy Girgis, Hartlebury
Dr Shashi Gopinath, Croydon
Dr Steve Graystone, Worcester
Dr Emil Guirguis, Newcasdtle Rd
Mr M S Hashmi,
Dr Liz Hunt, Birmingham Moseley
Dr Jo Janes, Dinas Powys
Dr Luis Jimenez, Princess Of Wales Hospital
Dr Sundeep Karadia, Cheltenham
Dr Weeraman Karunaratne, Cottingham
Dr Zahid Kazmi, Coventry
Dr Apostolos Kontes, Birchhill Hospital
Dr Max Kyi, Sutton Coldfield
Dr Sri Kishan Lal, Grimsby
Dr Lucy Leong, Leicester

Dr Jasmine Lucas, Musgrove Park
Dr John Macleod, Catshill Bromsgrove
Dr Meenakshi Malhotra, Ferncrest
Dr Chris Marsh, Kidderminster
Dr Shahid Mirza, Rawtenstall
Dr Kah Mishra, Bronglais General Hospital
Dr Pitabas Mishra, Marsten Green
Dr Sudha Mittal, Kinswinford
Dr Czeslaw Molodecki, Shrewsbury
Dr Shyamala Nadaraj, Eastbourne
Dr Patricia Obrien, Shustoke
Dr Regina O'connor, Southern General Hospital
Dr Dafydd Parry, Whitchurch
Dr Pamula Prasad, Rogerstone
Dr Saratha Rajah, Hadleywood
Dr Raju Reddy, Birmingham
Dr Frankie Reid, Broard Oak Crescent
Dr Chakralvar Sathyanarayana, Binley
Dr Riaz Shaikh, Rochdale Infirmary
Dr Jasmin Singh, Shannon Place
Dr Douglas Smith, Harnhill
Dr Sathasivam Sritharan, Maidstone
Dr Laura Stannard, Heaton Moor
Dr Wilson Thomas, Worcester Royal Hospital
Dr Jayapriya Venkatesan, Reinerva Road Farnworth
Dr Barney Ward, Hurley
Dr John Waterland, Beverly
Dr Chris Weston, Solihul
Dr Laurie Wheeler, Cardiff
Dr Jonathan Williams, Cheltenham
Mr Nicholas Wilson Hole, Royal Cornwall Hospital

LOCAL ANAESTHESIA FOR OPHTHALMIC SURGERY

11th Video-conference Meeting

A CME approved meeting for anaesthetists and ophthalmologists on Local Anaesthesia for Ophthalmic Surgery will be held in **North Riding Infirmary, Middlesbrough on Friday, 7th February 2003.** The meeting will include **lectures and live demonstration of orbital blocks.** Attendance is limited to 50 participants. Application form and information from Mrs Pat McSorley (**Course Administrator 01642-854601 email: pat.mcsorley@stees.nhs.uk**). Registration fee is £225 (BOAS Members £200) (inclusive of catering). **Cheque payable to Ophthalmic Anaesthesia Education Fund.**

PROGRAMME

09.00-9.25	**Registration & Coffee (Staff Restaurant)**
	Lectures Ward 56 (Day Centre)
9.25	**Welcome: Prof Chris Dodds, Middlesbrough**
Chairman:	**Prof Chris Dodds, Middlesbrough**
9.30-10.15	Anatomical consideration for ophthalmic block **Dr Gary Fanning, Sycamore, Illinois, USA**
10.15-11.00	The method of action & application of parabulbar block **Dr Scott Greenbaum, New York, USA**
11.15-11.45	**Coffee Break (Staff Restaurant)**
Chairman	**Dr A P Rubin, London**
11.45–12.15	Pharmacological considerations for ophthalmic block **Dr Hamish McLure, Leeds, UK**
12.20-12.45	Sedation and ophthalmic block **Dr Gary Fanning, Sycamore, Illinois, USA**
12.50-13.45	**Lunch**
13.45 -17.00	**Live Demonstration of Orbital Blocks(Ward 56)**

Demonstration Co-ordinators: Drs Anthony Rubin, Robert Johnson, Chandra Kumar, Mr Tim Dowd, Mr Mamdoul El-Naggar and Mr David Smerdon

Retro and/ or peribulbar	**Dr Chandra Kumar, Middlesbrough** **Dr Anthony Rubin, London** **Dr Sean Tighe, Chester** **Dr Narinder Dhariwal, Sunderland**
Medial Peribulbar Block	**Dr K L Kong, Birmingham**
Recorded video	**Dr Gary Fanning, Sycamore, Illinois, USA**
Sub-Tenon's	
Metal Cannula	**Dr Guri Thind, Liverpool**
Kumar-Dodds's Cannula	**Dr Raju Chabria, Middlesbrough**
Greenbaum's Cannula	**Dr Chandra Kumar, Middlesbrough**
Recorded video	**Dr Scott Greenbaum, New York, USA**
Ultrashort Cannula	**Mr Bartley McNeela, Middlesbrough**
17.00 Closing remarks	**Prof Chris Dodds, Middlesbrough**

Course Director and meeting Organiser: Dr Chandra Kumar, Consultant Anaesthetist, Cleveland School of Anaesthesia, James Cook University Hospital, Middlesbrough TS4 3BW. Tel: 01642-854601, email: cmkumar@boas.org