Chairman’s Report 2004

The last year has been rather quiet after the large IFDAS meeting in Edinburgh. The latest DSTG document Advanced Sedation Techniques was launched around the same time and there followed some correspondence most of which did not recognise this was a discussion document.

The document was discussed in detail at the symposium in Liverpool (see meeting report) and there was support, though not unanimous, for DSTG taking the document forward. This will happen at the next committee meeting.

The meeting in Liverpool went well and served at least one of the aims of DSTG “To exchange ideas on practice and research in the field of conscious sedation in dentistry”. It was good to see many familiar faces there and some new members.

There have been some changes in the committee structure both in the dental schools representatives and in the elected members. My thanks go to all serving and past members of the committee.

The strength of DSTG is our representation from UK dental schools. We must not forget our prime goal: to encourage the teaching of sedation to undergraduates so that all graduate with hands-on experience of basic sedation techniques.

Carole A Boyle

DSTG have produced a

“Logbook of Clinical Experience in Conscious Sedation”,

available on the website at www.dstg.co.uk

DSTG hope that the Logbook will be utilised by both undergraduate and postgraduate students, to record their experience of conscious sedation techniques.

Diary Date
Annual DSTG Symposium 2005

Paediatric Sedation

26th April 2005

The Royal College of Physicians and Surgeons of Glasgow,
232 -242 St Vincent Street. Glasgow.

Anyone wishing to submit a free paper for the Symposium should forward an abstract to

Dr Carole A Boyle, Chairman DSTG
Department of Sedation and Special Care Dentistry
GKT Dental Institute
Floor 26, Guy’s Tower
London SE1 9RT, UK

020 7188 6074 carole.boyle@kcl.ac.uk
DSTG Annual Symposium

Foresight Centre, University of Liverpool,
11th May 2004

The Annual Symposium was held in the former Liverpool Royal Infirmary that was originally opened in 1889. This splendid building, designed by Sir Alfred Waterhouse - the Sir Norman Foster of the day – reflected the high Victorian Gothic architectural style.

The Chairman Carole Boyle opened the symposium; she welcomed the guests commenting that, as many of the attendees were ‘in the morning of their careers’ the future for conscious sedation in dentistry bode well.

Carole outlined the aims and objectives of the Symposium:
• to make recommendations for the strategic direction of the Group with respect to “advanced sedation”
• to develop sedation teaching practice
• to inform the Group of research that members were currently involved with.

Dr Nigel Robb, Senior Lecturer in Sedation in Relation to Dentistry, University of Glasgow, set the scene by reminding members that “Training for Safe Practice in Advanced Techniques for Adult Patients”, (the ‘June 2003 Document’) was a discussion paper and not a prescriptive protocol. He stated that the mainstay of dental conscious sedation was either the administration of the single drug midazolam by the intra-venous route or the use of inhalational nitrous oxide / oxygen; these were referred to as “standard techniques”. The intention of this discussion paper was to open debate on the various “other” or “advanced” techniques for use in the small minority of patients who cannot be managed by “standard” means.

Chris Holden, Immediate Past President of SAAD, presented a paper “Advanced Conscious Sedation: The Way Forward’ that had been the theme of a SAAD meeting held in November 2003. Chris emphasised the need for advanced conscious sedation in dental practice but only if adequately trained personnel undertook this and that these various techniques should not be restricted if they were deemed clinically appropriate. He voiced his concern with respect to the cost of training and equipment and also to the availability of appropriate training for the dental team.

David Debuse, in his inimitable style, continued with a review of the meeting “Masterclass in Conscious Sedation” held at the Royal College of Surgeons of England in April 2004.

David Craig, Associate Specialist in Sedation, GKT Dental Institute, London, delivered the final paper of the DSTG morning session, ‘Advanced Sedation Techniques – what is our role’. Training of dental students was considered; it was critical that sedation be taught during the undergraduate programme as stated in the ‘First Five Years’. The message was to “get it right at undergraduate level”. The barriers to the receipt of adequate training were defined as lack of funding and human resources, a crowded timetable and a general ‘fear’ of sedation by some teaching staff. Sedation teachers needed to be competent in basic techniques, experienced and confident with much enthusiasm that would be the key to overcoming these barriers.

Obtaining clinical experience through adequate clinical support for advanced sedation techniques was the major problem to be resolved although ninety-eight per cent of patients could be treated with standard techniques. David posed more questions for consideration, e.g. where should advanced conscious sedation be carried out and should DSTG become involved in advanced training.

There were discussion groups following the morning’s papers that would consider specific areas of sedation; these outcomes would be recommended to the Executive for policy implementation.

The five questions and a summary of responses are outlined:

1. How experienced at basic sedation techniques should a practitioner have to be before moving on to ‘advanced’ techniques?

Dental sedationists should have extensive experience in basic techniques. It was suggested that the Diploma in Conscious Sedation was not adequate to undertake ‘advanced’ sedation and that bolt-on modules would be necessary to demonstrate competence. If an operator did not have adequate knowledge of the client group then a team of operator plus sedationist would be necessary.

2. Select what you consider to be the three most useful ‘advanced’ sedation techniques from the list in the DSTG Discussion Paper. Are the training requirements and experiences appropriate? If not, how would you change them?

The feeling was that polypharmacy by the intra-venous route was likely to be useful for experienced sedationists. Transmucosal sedation and the mixed route e.g. nitrous oxide/oxygen and midazolam were also thought likely to be convenient alternatives. There was debate as to whether sedation using oral midazolam was a supplementary ‘basic’ or ‘advanced’ technique. Issues related to the need of further research came out strongly in this discussion, as did the possible need for specialist centres if operator controlled propofol was used. Views were also aired as to whether dentists with special interests or anaesthetists administer these techniques.

3. In relation to ‘advanced’ conscious sedation should DSTG become involved in:
• Writing a detailed syllabus for courses
• Accrediting courses
• Running courses
• Writing clinical protocols
• Accrediting practices

It was felt that DSTG should be a strong pressure body campaigning for organised training, the promotion of good clinical practice and offering sound advice. The discussion group recommended that DSTG should write a detailed syllabus for advanced sedation training but not become involved in the accreditation of practices. It was emphasised that any courses on advanced sedation be organised and run in conjunction with Dental Nurses.

4. Should undergraduate teachers of basic sedation techniques also have some knowledge of ‘advanced techniques’?

The consensus of opinion was ‘yes’ to this question.

5. What do you consider to be the most important barriers to the teaching of ‘advanced conscious sedation techniques’ to postgraduate students? How might each be overcome?

Various barriers were cited including diversity of techniques, ethical issues related to the small proportion of the population that needed these advanced techniques, clinical experience, funding, service need and training aspects.

These discussion groups proved to be lively and very interactive; there was a sense from participants that their contributions would shape policy decision-making of DSTG.
Chris Bell, University of Bristol Dental School, considered the difficulties and restrictions of ensuring that dental students were proficient in venepuncture and cannulation (V&C). Chris referred to paragraph 57 in GDC document ‘The First Five Years’ that states undergraduates should “know how to give intra-venous injections”. Some of the difficulties were that there was no preclinical introduction to venepuncture, no formal assessment of competence and apart from surgically trained dentists few staff were experienced in V&C.

Shelagh Oliver, Clinical Lecturer in Restorative Dentistry University of Wales, presented a paper ‘Problem Based Learning (PBL) in sedation teaching’. This mode of learning had commenced in France in the 1920’s, and introduced to McMaster Medical School, Ontario in 1969 and Maastricht Medical School in 1974. Sheila explained what PBL was and that its’ processes were both dynamic and cyclical in nature. Learning objectives are set, scenarios constructed, facilitator guidelines written, a pilot study undertaken with staff and students, refinements made prior to implementation followed by evaluation on completion of the project. There were usually eight to ten subjects in the group led by a chairperson, a facilitator (tutor) and a scribe for record keeping. The advantages of PBL were motivation, integration, testing of generic competencies, student-centred and depth of learning within a constructive framework. Some disadvantages are that it is high in resource use, teachers need to be trained in the technique and there is a tendency for information overload.

The fourth paper delivered by Nicole Dunning, Senior Dental Officer, Sedation and Special Care Dentistry, was ‘Teaching Sedation in Outreach Clinics in Sheffield’. Nicole described a scheme for teaching sedation to 5th year undergraduates that had been initiated in 1996, and the current programme that began April 2004. Since April 4th year students were now attending for a five week block undertaking five clinical sessions per week at either CDS clinics or Dental Access Centres; the remaining time was spent shadowing in specialist clinics. Benefits to students included the application of professional standards to sedation, teamwork and an awareness of the expectations as set out in the DSTG document ‘The Competent Graduate’ as well as an appreciation of Clinical Governance and time management. Evaluation of the scheme showed that the students enjoyed the experience, and gained much realistic practical experience. The outcomes for the supervising dentists were that a more appropriately trained and expanded workforce was in the making, another stakeholder in the Service was involved and above all it was fun!

Sarah Manton, Senior Lecturer Restorative Dental Care & Clinical Dental Sciences, Dundee Dental School continued the programme by describing how undergraduate teaching in inhalational sedation was carried out at Dundee. The challenges for students are that they are novice clinicians and that success greatly depends upon good patient behavioural management; timing of when to deliver this tuition is also critical. Students are expected to carry out a minimum of ten cases mostly on child patients (excluding those under five years of age). They are assessed in the 5th year using the SCOT process for both treatment and sedation aspects. At graduation they will know how to undertake inhalational sedation but enter VT aware of their limitations and the need to acquire formal postgraduate skills.

David Craig, Associate Specialist in Sedation at GKT, gave the final presentation; the paper was entitled ‘Quality versus Quantity’. He suggested that in order to remedy a waiting list problem for sedation services quality was being measured by numbers; this was not a valid approach. DSTG has set out in the publication ‘Guidelines for Teachers, 1999’ the due standard for undergraduate teaching. David posed the question, ‘Could we do better and improve this guidance’. Other quality indicators included adequate clinical space and recovery facilities, appropriate clinical layout and a range of sedation equipment. Patient management was deemed to be a significant aspect of quality as was the selection of subjects who were likely to attend. Formulating achievable treatment plans with the need to avoid failure was essential to maintaining morale in the sedation team. The audit process should be used systematically to assess performance from both the team and patient perspectives as this would lead to improvement change.

David urged that Dental Nurses involved in Conscious Sedation should be supported to undertake courses leading to the Certificate in Dental Sedation Nursing awarded by the NEBDN; he concluded by asking whether the DSTG Guidance needed to be reviewed.

For the remainder of the afternoon, delegates enjoyed four free papers, abstracts of which are printed overleaf.

The Chairman thanked Dr Lesley Longman, DSTG Committee Member for Liverpool, for organising such a successful symposium.

Mr. S. G. Jones.
DSTG member
June 2004
Symposium Abstracts
DSTG Annual Symposium
Foresight Centre, University of Liverpool,
11th May 2004

Running a sedation course: Problems & Pitfalls

V Kewley
SDO Special Care Dentistry
Lancashire Teaching Hospitals NHS Trust

V Brookes
Director of Dental Services
Lancashire Teaching Hospitals NHS Trust

Abstract
Objectives:
To describe sedation courses run by the department of Special Care Dentistry at Chorley District Hospital.

To discuss the problems encountered and describe the evolution of the courses over the years

To describe the new course structure

A comparison of Sevoflurane and Nitrous Oxide as Inhalation Agents for Dental Sedation

Dr Sadie Thomas
BDS MFDSRCPs MSc
Staff Grade
Sedation and Special Care Dentistry
Guy’s, King’s and St Thomas’ Dental Institute

Abstract
Aim:
To compare sevoflurane and nitrous oxide as methods of inhalation sedation for anxious adult dental patients.

Method:
Fifteen ASA I and II anxious dental patients, were selected from the patient population of the Department of Seda-
tion and Special Care Dentistry. Patients participating in the study required two similar items of dental treatment. Each patient attended for two treatment visits in addition to the assessment visit. Patients were randomly assigned to two groups, determining which of the two sedative agents (sevoflurane / oxygen or nitrous oxide / oxygen) was to be used for the initial treatment session.

Results:
There was no statistically significant difference in operator preference, between nitrous oxide / oxygen and sevoflurane / oxygen. The majority of patients preferred nitrous oxide / oxygen. This may be due to the additional psychological benefits this agent provides. Adequate anxiolysis for dental treatment was obtained with both agents.

Conclusions:
In light of recent concerns regarding the safety of chronic nitrous oxide exposure and its damaging effects on the envi-
ronment, sevoflurane would appear to be a viable alterna-
tive to nitrous oxide.

Exposure to nitrous oxide in a paediatric dental unit

F Gilchrist 1, M T Hosey 2, C J Whitters 2, A M Cairns 2, M Simpson 2
1. Edinburgh Postgraduate Dental Institute,
2. Glasgow Dental Hospital And School

Abstract
Objectives:
To evaluate the time-weighted average (TWA) exposure to nitrous oxide of dentists working in a paediatric dental unit.

Basic research design:
Monitoring of nitrous oxide levels using sensors worn by the operator on the lapel togeth-
er with recording of patient’s age, treatment carried out, active scavenging system used, use of extractor fan, treatment duration, categorical rating scale, use of aspiration, use of rubber dam, flow rate of nitrous oxide/oxygen mix, percentage of nitrous oxide: oxygen used and rating of adequacy of nasal mask fit.

Participants:
Three operators administering nitrous oxide/oxygen for inhalational sedation to paediatric dental patients.

Results:
Data was collected from 17 treatment sessions with a total of 34 patients. Patients ranged in age from 4-16 years of age. Active scavenging was used for all patients. Time-weighted average over eight hours ranged from 16-374ppm with a mean of 151ppm.

Conclusion:
It is difficult to adhere to the recommended levels in this environment even with active scavenging and a scav-
enging nosepiece.
Conscious Sedation Services provided in Secondary Care or Restorative Dentistry in the UK – a Survey

Claire L Morgan
BDS MSc FDSRCS DipDSed
GKT Dental Institute
Department of Sedation and Special Care Dentistry

Ann M Skelly
MDS FDSRCPs FDSRCS
GKT Dental Institute
Department of Sedation and Special Care Dentistry

Abstract

Objectives: To assess the views of consultants in restorative dentistry on sedation services in secondary care for restorative dentistry and their involvement in the provision of this.

Design: Postal questionnaire survey in the UK.

Setting: Consultants in restorative dentistry.

Results: There was an 80% response rate from 179 consultants. Among consultants in restorative dentistry there was a perceived need for sedation services in restorative dentistry within NHS hospitals other than for teaching purposes. Anxiety and level of trauma of dental treatment affected whether consultants felt it appropriate for patients to have such treatment under sedation. One third (48) of consultants treated patients under conscious sedation, a significant number of these held substantive posts and had graduated more recently. Of those (41/28%) who provided treatment under conscious sedation in an NHS setting, most (38/93%) provided treatment under intravenous sedation of whom only eight (21%) acted as operator/sedationist. Nearly all consultants (135/94%) felt that specialist registrars in restorative dentistry should undergo some form of training in sedation.

Conclusion: Although consultants in restorative dentistry recognize the need for training in and the provision of sedation in secondary care for restorative dentistry, only one third of respondents currently provide this service.

Committee Members 2004

Carole A Boyle        Chairman        GKT Guys        carole.boyle@kcl.ac.uk
Paul Coulthard       Secretary       Manchester      paul.coulthard@man.ac.uk
Shelagh Thompson     Treasurer       Cardiff         thompsonsa@cardiff.ac.uk
Kevin Fairbrother    School Representative Birmingham Kevin.Fairbrother@bscht.wmids.nhs.uk
Chris NA Bell        School Representative Bristol Chris.Bell@bristol.ac.uk
Mary Clark           School Representative Dublin          mary.clarke@dental.tcd.ie
Sarah Manton         School Representative Dundee      sarah.manton@tuht.scot.nhs.uk
Isabelle Holroyd     School Representative Eastman      isabelleholroyd@hotmail.com
Avril Macpherson     School Representative Edinburgh     avril.macpherson@lptc.scot.nhs.uk
Nigel D Robb         School Representative Glasgow       n.robb@dental.gla.ac.uk
David C Craig        School Representative GKT Guys       david.craig@kcl.ac.uk
Phil Rood            School Representative GKT Kings      phil.rood@kcl.ac.uk
Alistair Speirs      School Representative Leeds          a.f.speirs@leeds.ac.uk
Lesley Longman       School Representative Liverpool      L.P.Longman@liverpool.ac.uk
Ameeta Joshi         School Representative Manchester     ameeta.joshi@man.ac.uk
Katherine Wilson     School Representative Newcastle     Katherine.Wilson@ncl.ac.uk
Chris Mercer         School Representative Royal London    c.mercer@qmul.ac.uk
Nicole Dunning       School Representative & Publicity officer Sheffield     june.webster@sheffieldse-pct.nhs.uk
Ian Fletcher         ADA rep         Newcastle       Jan.Fletcher@nuth.northy.nhs.uk
Chris Holden         SAAD rep
Derek C Debuse       Elected
David Jordan         Elected
Victoria Kewley      Elected
Sheila Oliver        Elected
Meg Skelly           Elected
Chris H Wright       Elected

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carole.boyle@kcl.ac.uk
paul.coulthard@man.ac.uk
thompsonsa@cardiff.ac.uk
Kevin.Fairbrother@bscht.wmids.nhs.uk
Chris.Bell@bristol.ac.uk
mary.clarke@dental.tcd.ie
sarah.manton@tuht.scot.nhs.uk
isabelleholroyd@hotmail.com
avril.macpherson@lptc.scot.nhs.uk
n.robb@dental.gla.ac.uk
david.craig@kcl.ac.uk
phil.rood@kcl.ac.uk
a.f.speirs@leeds.ac.uk
L.P.Longman@liverpool.ac.uk
ameeta.joshi@man.ac.uk
Katherine.Wilson@ncl.ac.uk
c.mercer@qmul.ac.uk
june.webster@sheffieldse-pct.nhs.uk
Jan.Fletcher@nuth.northy.nhs.uk

Chris H Wright

carole.boyle@kcl.ac.uk
paul.coulthard@man.ac.uk
thompsonsa@cardiff.ac.uk
Kevin.Fairbrother@bscht.wmids.nhs.uk
Chris.Bell@bristol.ac.uk
mary.clarke@dental.tcd.ie
sarah.manton@tuht.scot.nhs.uk
isabelleholroyd@hotmail.com
avril.macpherson@lptc.scot.nhs.uk
n.robb@dental.gla.ac.uk
david.craig@kcl.ac.uk
phil.rood@kcl.ac.uk
a.f.speirs@leeds.ac.uk
L.P.Longman@liverpool.ac.uk
ameeta.joshi@man.ac.uk
Katherine.Wilson@ncl.ac.uk
c.mercer@qmul.ac.uk
june.webster@sheffieldse-pct.nhs.uk
Jan.Fletcher@nuth.northy.nhs.uk

Chris H Wright

Opinion - Can Paediatric Sedation Be Done Safely?

There are few areas in anaesthesia and sedation as controversial as the pharmacologic management of anxious/uncooperative children outside of the operating room. In children, it is argued that conscious sedation is a myth and that a deeper level of sedation is required. The purpose of this paper is not to debate the issue if conscious sedation is possible in children – the author is of the opinion that this is possible. It is safe to say that paediatric sedation over the past years has become safer because of guidelines, advances in technology, newer, safer drugs, a better understanding of pharmacokinetics / dynamics, research, publications and a focus on training. This leads to an important question – why would paediatric sedation be unsafe – our foremost goal is then to optimize safety. There are however reports of serious, potentially life-threatening, adverse events in literature that we have to take note of. However, there are also studies that show that adherence to guidelines for paediatric sedation reduces the incidence of adverse events. This is consistent with a reduction in the incidence of adverse events during general anaesthesia if guidelines for safe practice are followed. Unfortunately there are also sedationists that do not follow guidelines.

We have to accept that paediatric conscious sedation techniques are being done safely – numerous studies are available in literature.

The question remains – how can we safely do this outside the traditional operating theatres and convince others that it is safe. Paediatric sedation can be safely done if we take into account and follow the established guidelines, and realize that children have unique characteristics that appear to increase the risk of adverse events (drug responsiveness, anatomy / physiology, psychological make-up).

We have to develop structured programs that include pre-sedation risk assessment. This is probably the most important aspect of preparing for paediatric sedation – all children do not qualify for sedation! The assessment is especially important where sedation is done by those with diverse practice specialties. Included in the structured programs must be training, monitoring standards, time-based recordings of levels of consciousness, vital signs, and an assessment of fitness for discharge.

A more difficult question to answer is, in whose hands would it be safe. By definition anaesthesiologists are the airway experts. As the experts they must become involved in credentialing processes, training and establishing guidelines. Some would argue that paediatric anaesthesiologists provide the most appropriate group to do paediatric sedation. However, because of insufficient manpower they cannot always meet the increasing demand for paediatric sedation. We as a profession have a very important role to play in providing training to meet the demands for paediatric sedation. The demand for sedation services is among the most rapidly growing fields in anaesthesia care. We have to accept this and meet the challenge to make paediatric sedation safe.

Professor James Roelofse
Head: Anaesthesiology and Sedation.
University of the Western Cape
Private Bag X1
Tygerberg 7505
South Africa
jaroelofse@uwc.ac.za

Thanks to contributors to the newsletter

Stephen Jones
James Roelofse

Any suggestions for future newsletters to the Editor

Dr Nicole Dunning
South East Sheffield Primary Care Trust
Dental Directorate
9 Orgreave Road
Handsworth
Sheffield S13 9LQ

Email: june.webster@sheffieldse-pct.nhs.uk