



TECHNICIANS' PROGRAMME

Report by Sally Wood



The **Technicians' Programme** received a warm welcome to the congress from the ADI president **Paul Stone**. After wishing the speakers and delegates a successful day, he reminded his technical colleagues that we are regarded as equals and the Association works very hard to promote the teamwork approach to implantology.

Larry Browne, the ADI Technical Representative, introduced the speakers throughout the day and reinforced the importance of education and equal status of the technician. This sentiment was also reflected in the inspired lecture programme, as there were a couple of surprise inclusions for which the ADI committee should be congratulated. Larry concluded that he would like to see Dental technologists and implantologists having the same recognition as the clinician and **today's programme** evidenced the fact that **professionalism cannot be given, but has to be earned**.



MARK OBORN LBIDST RDT - London, UK

The Aesthetic Challenge - Principles for Success

Mark has a laboratory in the west end of London, SBO. He recently downsized from 30 technicians to 4 as a deliberate step to concentrate on quality dentistry. He began with a visual tour around his laboratory. He illustrated that half the space is working technical space and half is a consultation area. This particular arrangement was to suit his own business philosophy, which also includes one day a week focusing on the business side of the laboratory. Mark is a shrewd and direct technician and has your attention from the outset.

He stated that the common starting point for all his lectures is the principle of common learning conceptions. **Basically what do we think learning is?** It is not just an increase in facts and knowledge but a learning process by which we can change as a person and of course, we should not forget the importance of inspiration.

Mark started this whole learning process off with a look at the dynamics of teamwork. Each team member should have complimentary skills, a common purpose and goals which should all be mutually accountable. This makes a team and not just a group. Mark then graphically illustrated the stages of team building

- Forming** - the desire to impress.
- Storming** - establishing leadership and the power to implement ideas.
- Norming** - establishing the level at which all work should be done

- Performing** - when you reach this level as a routine.
- Adjourning** - the important stage of reviewing the working relationship and devising practical steps to steps to improve product and service.

Mark then moved on to the technical elements for aesthetic success. The concept of the golden proportion is not new and was used as early as the 12th century by **Leonardo Fibonacci**. This ratio is used by designers and artists in the commercial world and its principles are seen in nature, the human body and of course teeth. We can apply it to our own work as a useful device to have in the laboratory.

Mark discussed optimum lighting within the laboratory environment, and also his own experiences with digital shade taking devices. Never afraid to court controversy, Mark pondered whether any hardware available today was truly accurate enough yet. He did elaborate on his own methods including the use of Photoshop to show the value of a shade by reducing the brightness.

Improving communication is vital since the perception of beauty is variable. This is where Mark utilises his consultation area in the lab to have more patient contact. The usefulness of email should not be underestimated to communicate with the dentist. For example, unclear margins or articulation queries.

As a striking, confident speaker, Mark said that it is our role within the team to consider these evidenced based principles and scientifically proven data in order to achieve successful aesthetic cases.



MARK GILBERT MSc. Mngmt. FBIDST
 - Manchester, UK

Bridging the knowledge gap

Mark began his dental life as a qualified dental technician becoming a laboratory owner then dental instructor. As senior lecturer at MMU he has a growing academic pedigree. He believes that education is a fundamental aspect of a professional dental technician. He opened a question to the audience **'What do you need to be a professional implantologist?'** With the aid of film clips Mark helped us to find the answer. The use of film clips to tell his story is a familiar trait of Mark's although clearly too young to be eccentric he does have unconventional methods to encourage freethinking.

Mark stated that he would like to see us all as professional implantologists, but how do we achieve this?

Well, it's not through certificates of attendance, nor is it based solely on technical competency but professional relationships. We need to shift our traditional mindset and focus from how to why in order to discuss problems and inform practice. How can we ensure good practice when technicians are traditionally constrained by routine? Tensions can exist because dentist and technicians use different terminology and we need to marry the

clinical and technical competences. Good practice requires understanding of technical competence, material science and clinical procedures.

Mark suggested that now is the time to question the imbalance in our working system. Its complexity is due to different ideas by different people including different knowledge providers. There is no better illustration for this scenario than a clip from the film the Gladiator, as Russell Crowe is in the arena facing the Romans he says **'if we stay together we can survive'** To progress we need teamwork and leadership.

Education and qualification along with professional development equals a professional implantologist. Mark and the MMU have created a diploma in implantology, a practical and academic course for technicians.

Mark's approach was both academic and contemporary. He managed to engage the audience and stimulate the mind. It's all about us as technicians shaping implantology, changing ourselves, our practices, our way of life and those around us. In short, gain knowledge and share it with your colleagues. What is unquestionably required is a course to gain academic credit for what we do along with a scientific basis.



RUTH BOURKE LLC - Seattle, USA

How fixed is my fixed - removable prosthesis?

Ruth has an impressive C.V, and at present runs her own laboratory in Washington. She began her work under the guidance of **John Besford** followed by various teaching posts in the UK and the States covering implantology, complex partial design and occlusion.

Ruth opened her presentation with the question, **'What are we doing and do we know?'** To begin there are three areas to consider. **Firstly, what do patients prefer?** Maybe they don't mind or perhaps have preconceived outcomes realistic or not. **Secondly, do we know the financial implications from the outset as treatment options can vary significantly?** **Thirdly, what of the biomechanical limitations?** Her answers were always supported

by scientific research and documented evidence. **When it comes to maxillary over dentures, what do patients prefer?** Maybe they don't mind or have preconceived outcomes - realistic or not. **Do we know the financial implications from the outset?** What of the biological limitation? These of course include quality of bone, number of implants, arch form, rigid or non rigid design palate or no palate. At this point Ruth suggested a book by **Carl Misch** as good reference guide when considering complete edentulous prosthetics.

When it comes to the question of design, there are many options, which makes this subject so complex. However, Ruth's experience shone through, with her careful and cultivated approach to the technical aspects of this process. The obvious and possibly most frequently requested option by

patients is porcelain fused to metal. Other options are hybrid screw retained, milled bar, over denture and resilient bar connection. Ruth offered her own suggestions and case studies with supporting slides.

She is mindful that bone loss equals loss of lip support, which needs consideration. Ruth was completely unfazed when computer gremlins appeared during her presentation. One couldn't help feeling this calm and measured response is how she approaches and completes so successfully these complex cases.

She showed some of these large cases that she sees on a daily basis and described a useful aid instead of a silicone matrix. Ruth devised a light cured matrix to use during over denture construction. She called this device a spider, complete with locating spurs to aid seating. Gum shade tabs are also valuable aids for natural appearance.

When it comes to implant numbers, if you have 7 in the maxilla, then the treatment options are extensive. With 4 implants in the maxilla it is obvious that there are reduced design options. Ruth offered her own relatively easy solution here with a chrome palate and 4 locator attachments - a fairly new technique. When it comes to 2 implants in the maxilla - just don't do it!

If you are operating in the real world - as Ruth does - relevant factors for success, include evaluating patient desires and ensuring dentists have sufficient design knowledge. It is the ability to communicate effectively and efficiently that will lead to greater success.

Ruth is a very honest, intelligent speaker, but a realist, which leads her to believe that whilst there are fundamental questions which remain unanswered, we should use our knowledge and experience to adapt to these challenges.



STEVE TAYLOR LBIST, RDT, Leyland, UK

Implant prosthesis construction procedures

This lecture focused on the practical steps for technicians with the emphasis of the effects of our procedures have on the biological impact for the patient.

This practical focus comes as no surprise as Steve is a 'hands on technician.' This presentation demonstrated his high level of practical ability matched only by his keenness to share this knowledge.

A modest, engaging speaker, he asked the question **what is a professional technologist?** His answer was that we should be able to work with the clinician for the best interests of the patient. Mindful of the fact that he suggested this means re-examining some of our procedures that will maximize patient results, but which may well conflict with existing pre-concepts. Our current procedures, materials and techniques may have negative biological impact, affecting soft tissue and indeed bone.

The first example within the oral environment is abutment design. Whilst a common technical procedure, the design preparation should not be exclusive to the clinician. Ideally it should be 3 degrees resulting in an overall taper of 6 degrees. It is routine for the abutment to be tried in by the clinician. This connection and disconnection of the abutment and repeated removal of the healing caps can have a long term damaging effect on the patient as evidenced in well-documented, published papers. An alternative to this would be placing the abutments in-situ and keeping them in place once metal framework has been tried over abutments. Steve demonstrated his method for duplicating the abutments in silicone and epoxy resin.

It maybe a more lengthy and exacting technique for us but less risk for the biological response of the soft tissue. Steve always finds the time and inclination to share his working practices and a little tip when milling these abutments is to use cling film to keep the model clean!

Steve then went on to show a logical method for a two part provisional acrylic crown. This includes establishing the gingival margin on the model, and therefore, the soft tissue is not compromised by flooding excessive acrylic into the new implant site.

Next Steve showed the alternative beam construction using the **Procera Implant Bridge** system. It is well documented that laboratories routinely struggle to achieve castings that fit accurately and passively. The notion that a multi million pound machine in Sweden can produce these very accurately is very appealing and made in titanium, none of the associated weight of gold issues. Having discovered that titanium fused to porcelain can be aesthetically compromising, Steve discussed the relatively new material that he has been using - HFO composite. It is a highly flexible system with excellent aesthetics and combined with use of **Rocotec** technique proves highly successful. Although there are 10-year studies available on the direct composite HFO, this laboratory system is still being assessed. **But could this be tomorrow's technique today?**

With a keen eye on the future and progression of his fellow professional technologist, Steve shared his techniques with valuable construction aids to improve what we do.



BARBARA HUTCHINSON BA (Hons) DipAD CAM
 - Beaconsfield, UK

What is it you really want to say?

Well, if you didn't know what to say or how to say it at the beginning of this presentation, you certainly did at the end. Barbara is a dental friendly marketing consultant and confirmed that by being professional extends beyond our own technical competency.

The first step is to identify your business; **do you know how it is perceived?** To profile a business you need to know what its core values are and create a brand to communicate this. These values are reflected in the name, logo and strap line. So it is vital to define what your business stands for without becoming typecast.

So, you got yourself a logo. Now you need to understand the environment in which your business operates. This means client analysis. This information can be gathered using a targeted questionnaire to find out for example who they are, are they implant specific, geographical proximity etc. The results should give qualitative feedback and statistics that we need to action.

Now a plan exists but we have to deliver a profes-

sional service. The P word again. For example, having a protocol for dealing with new clients to represent the business core values. Telescripts can aid communication and good staff training is imperative. These theories should be enshrined in day-to-day practices and underpin our practical work. Each team member needs to be on board and motivated to respond. After all, everything we do communicates something to someone.

Fact. Dentists are consumers too!

Maybe quite conservative but certainly consumer savvy. Barbara itemised the various tools for communication including brochures, newsletters, websites etc. And the highly effective laboratory open day. These can be used to launch new products or implant services and are a great way to promote team building within the business.

Finally consider your budget. A business should have some idea of financial resource available and a set of objectives.

So there you have it, although absence of visible examples, Barbara took the audience on a comprehensive step by step stroll the methods of effective marketing.



BERNHARD EGGER MDT - Fuessen, Germany

Considerations on aesthetics

Bernhard is a German master technician having established his dental laboratory in 1990. He has created an interdisciplinary teamwork approach within the lab, working with restorative dentist, implantologists and orthodontists.

The opening of Bernhard's lecture echoed his own graceful presence awakening the senses with beautiful images and flowing music. After a gentle visual introduction he moved onto the serious discussion of the functional aesthetic demands on materials, techniques and knowledge.

He began by explaining the difference between systematic principles and philosophies. A philosophy is not always based on facts and can even be considered a myth or fairytale. A systematic

approach is more orderly and methodical. With implants of course, you have to think before you start, so plan ahead. He then discussed some of the planning stages and methods that he uses. He reinforced the importance of surgical templates, underlining the fact that they are not timewasters, but time savers. You can also plan for gingival forming by careful design of the temporary. When it comes to abutment design, Bernhard suggested using transparent silicone putty as a guide for creating the correct shape, rather than relying on the eye. Why rely on the eye when this can be measured.

Bernhard examined the theories surrounding shade and colour stating that the perception of colour depends on various factors and he feels we need computer aided shade determination, not leaving things entirely to chance relying solely on the eye. His preferred choice is the Shofu shade

eye as it delivers a recipe for porcelain and the image data can be emailed too.

With yet more wonderful slides Bernhard illustrated the difference between unprepared cases and planned designs. He also gave an insight into his porcelain build up methods and stresses the importance of creative style, which should be free of interruptions such as the eternal request 'can you just?' Another irritation of his and indeed

others is the cost of abutments. **Too much! Are you listening implant companies?**

To summarise Bernhard's message is simple **'more time planning less time doing.'**

Bernhard's highly evolved knowledge base and creative competence makes the complex look effortless.



HYGIENISTS' PROGRAMME

Chairperson: **Mrs Anne Gow**

Report by Claire Crabb, Lyme Bay Dentistry, Dorset



The 2005 ADI Congress saw many enthusiastic hygienists attending lectures spread over two days.

The Thursday combined programme this year was opened by **Lynn D Terracciano-Mortilla**, who practices dental hygiene in Florida and is the Executive Director of **The Association of Dental Implant Auxiliaries and Practice Management**. Lynn's Overview of Implantology and Treatment Planning included personal accounts of patients in her care and how dental implants had transformed their quality of life. Lynn went on to impress upon us how 'oral disease affects our most basic human needs'. The ability to eat, drink and swallow enables us to maintain a well balanced nutrition. Our speech and our smile allow us to communicate. How often do we see a person hold a hand over their mouth when they talk or smile because they are conscious of the appearance of their teeth.

The wearing of a denture following tooth loss may overcome difficulties in mastication, however they may become insecure as a result of continued bone loss. Tooth loss also leads to the loss of tone in the muscles of facial expression, wrinkles appear, the lips may fold inward, making a person look a lot older than their years, greatly affecting their self esteem and quality of life.

Dental implants are the only long term solution to tooth loss. They are the only restoration that will maintain crestal bone support and give better stability and improved function, allowing the patient to enjoy chewing and tasting their food whilst improved muscle tone will give better aesthetics and thus make the patient feel better about themselves.

Evaluation and Assessment

Implants are predictable, aesthetic, and functional. Titanium is bone loving, strong, biocompatible, non corroding, and a poor conductor of heat, making it comfortable. However dental implants are not suitable for everyone. Contraindications include the patient who has undergone radiotherapy to the head and neck, and the immune compromised patient such as HIV, uncontrolled Diabetes or who currently has cancer. Smoking can increase the number of problems associated with initial healing and may negatively influence the long term health of the tissue and bone surrounding the implant. These patients should be encouraged to follow a smoking cessation program.

Implants should only be placed in a periodontally stable environment. The optimum bone classification D2, which has some sponginess but retains its form, can be determined with a CT scan which photographs 1mm sections of bone. The location of the maxillary sinus and the inferior dental nerve are also seen on the scan and must be avoided when placing dental implants. Healing bone should not be disturbed for up to 12 months after implant placement. You should not need to probe this area.

Peri-implantitis



Carmen Lanoway who practices dental hygiene in Germany gave an informative presentation on the role of the hygienist in the treatment and diagnosis of peri-implantitis. The hygienist is likely to see the implant patient more regularly than the dentist so it is important to look for the signs of any

deterioration in the tissue surrounding the dental implant. Both natural teeth and dental implants have a pocket. There is no cementum or periodontal ligament surrounding an implant. The perimucosal seal forms a tight cuff around the neck of the implant that prevents micro-organisms from invading this space. It is formed by circularised fibres only found in keratinised tissue. The loss of these fibres through disease mean that bacteria have a free point of entry and the aesthetic appearance of the tissue will be damaged. We need to look at the colour, texture, shape and size of the tissue this is the best indicator of the health of the implant.

Bleeding on probing is a better indicator of peri-implantitis than the depth of a pocket. The shape of

the prosthesis can impede accurate probing and an artificial pocket may have been constructed to achieve the desired aesthetics. Only a plastic probe should be used with light pressure, not previously used on natural teeth so as to prevent the migration of bacteria.

Peri-implantitis is a sign of poor oral hygiene. We can treat it with atraumatic debridement and a chlorhexidine gluconate rinse or gel, but we must establish a good home care regime. We need to motivate our patients, with short simple information backed up by visual and in mouth oral care demonstrations.

Following a coffee break, the lecture focussed on the evaluation, assessment, and care of dental implants. Lynn spoke on the importance of checking your patient's radiographs. Know that your patient has an implant and where it is. Check radiographs and use these to monitor crestal bone levels. It is also necessary to check the occlusion on implant prosthesis annually as excessive traumatic loading can cause bone resorption.

The design of the prosthesis will determine the cleaning regime. Select your plastic scaling instrument according to tip design and rigidity. Ultrasonic, stainless steel or titanium tipped scalers should not be used around the implant as they can cause surface scratches that attract more plaque formation. Avoid the use of coarse polishing paste and instead use sodium fluoride toothpaste or tin oxide. Power toothbrushes should not be used for up to 8 weeks whilst an implant site is still tender. Interdental brushes must be plastic coated and changed regularly. Thick fibrous floss is ideal.

Determine an appropriate recall schedule, usually 3 monthly, and develop a specific patient oral hygiene routine. We must motivate our patients to accept responsibility for their own oral health.

Lynn concluded her presentation after lunch, during which there was a useful hands-on instrument sharpening workshop given by **Carmen Lanoway**.



The hygienist programme concluded after a full day of lectures on Friday, with an enjoyable talk by **Simon Hocken**, who gave up practising dentistry and now runs Jump Coaching. Simon certainly had everyone's attention with his presentation on 'How to have fun at the practice, get appreciated and a pay rise'!



NURSES' PROGRAMME

Chairman: **Dr Phil Bennett**

Report by **Claire Crabb**, Lyme Bay Dentistry, Dorset

The sun was shining, not a cloud in the sky, I was in the beautiful city of Edinburgh with the rest of my practice and we were about to attend the ADI 2005 congress. What else could I possibly ask for? (Apart from a pay rise?)

The session was moderated by **Dr Phil Bennett**, President Elect of the ADI. He introduced the morning session by saying that for the first time, the ADI had organised a programme specifically for the nurses that would be taught not by dentists, but by the nurses and hygienists themselves. This represents a big step forwards in the nursing profession, especially as statutory registration approaches. The ADI is very proud of its record of education for nurses, and today's conference takes it one step further.

Dr Bennett introduced **Lynn Terracciano-Mortilla**, an old friend of the ADI. Lynn had kindly stepped into the shoes of **Edie Shuman Gibson** when she cancelled last minute due to the arrival of her long awaited baby - congratulations Edie!

I had first meet Lynn in Las Vegas last year at a certification programme for Dental Nurse's, organised by the American Association of Dental Implant Auxiliaries and Practice Management. Lynn is the Executive Director of the AADIA & PM. I was overwhelmed by the enthusiasm and organisation skills of this association and excited to be able to listen to an internal speaker who supported the ADI congress in 2003.

Lynn made her emotional opening presentation about why dental implants were so important to her. A story of a young man who lost all of his teeth in his 30's due to cancer and had been living with full dentures. This gentleman's young daughter had thought it was normal to lose your teeth and every night he put his teeth out and was waiting for the tooth fairy to put money in their place. This gentleman had been a hygiene patient of Lynn's for many years, and after suggesting dental implants to him, he had his mouth fully restored. He could now drink a cup of coffee and taste it. At the end of the story she informed us that this gentleman was actually her father and that young daughter was actually her. This story was so personal and told with emotion, it brought tears to many people's eyes.

'If we were doing so well with dentures and partials then why are there more and more adhesives coming to the market. In the US last year 3.5 billion dollars were spent on denture creams, denture adhesives and denture cleaners. If we could transfer this money into a system where people could afford more implants then we would be in a better shape as a society'. This was a shocking statement to many in the auditorium.

For the many dental nurses, hygienists and practice managers that are new to dental implants, Lynn presented a complete overview on the history of dental implants, the thoughts and ideas that were considered to be witchcraft, dental implant terminology, the development of dental implants, the surgical procedures and long term care.

Having worked in the dental implant field for the past eight years I was not disappointed in her informative and interesting presentation. My basic understanding of dental implant information was reinforced and I walked away from her presentation excited and proud to be a part of 21st century, predictable and comfortable implant dentistry.

Saturday morning and I had woken to yet another warm, sunny day and a full day of lectures to be presented to our dental team.



Kathi Carlson was our first lecturer of the day. Kathi is a graduate of **Indiana University's Certificated Dental Assisting Program** and has been in dentistry for 29 years, having devoted the last 15 years to implant dentistry. She currently works in the **Misch International Implant Institute** at the University of Detroit Mercy.

Kathi opened her presentation with the 'head bob'. I could see the rows of nurse's in front of me, heads moving up and down with agreement unknowingly all performing the 'head bob'. How many times do we see our patients agreeing to the dental surgeon and as soon as that surgeon leaves the room, we are left with the questions and answers. Have dental nurses and receptionists ever actually thought they are the individuals that actually make dental implants happen for many patients.

'When we make financial decisions we generally consider, what's in it for me?'

Kathi discussed patient's wants and desires. **What motivates a patient to go ahead with implant treatment? Did you know that the number one reason why patients do not agree to treatment is confusion and not actually money?** She empathised on making sure every member of our team know the answers to our patient's questions.

When you supply patients with a denture what do they think? They think they are getting teeth while what you are actually supplying them with is a prosthesis. A prosthesis is a replacement part. They look like teeth but don't function like teeth. If

you had a decayed right eye, we could make a glass eye. It will look actually the same as the left eye, but if you placed your hand over your left eye, would you be able to see out of that right eye?

Keep it short, keep it simple, keep it focused on them and give them the reason why you want to do it. Motivation is personal to every human, by asking the right questions and listening to wants and desires we can provide patients with dentistry we know is good for them.

After a coffee break Kathi, presented, as she described it, the nuts and bolts. She discussed the armamentaria, surgical templates and stents, pharmacology and sedation, surgical preparation, infection control and surgical procedures, ancillary procedures, sinus lifts, bone grafts, tissue regeneration and Platelet Rich Plasma, post surgical care and follow up evaluations.

On finishing her lecture, the audience obviously appreciated her presentation and so did our group.



Georgina Martin, is from Guys Dental Hospital, London. Georgina was appointed Senior Dental nurse in 1991 in the periodontology department of Guys Dental Hospital, where most of the implant surgery is performed. Her current responsibilities encompass the co-ordination of the dental implant team.

Georgina started her presentation by explaining her aims and objectives. Throughout her presentation she emphasised on the importance of aseptic dental implant procedures and described basic surgical procedures.

'The uses of alcohol hand gels are effective in complementing aseptic hand washing techniques'.

Georgina provided an inside view of the world of the teaching hospital. Her presentation provided a basic foundation in how to create a sterile field, drape packs and hand washing.

'It is important when opening pre-sterilised vacuumed packs that you inspect the packets and make sure instruments have not protruded through and become un-sterile'.

Georgina explained the importance of having two dental nurses attending during dental implant surgery. This provides a non-sterile nurse who is able to open externally non-sterile packages and pass to the sterile, gowned nurse. A demonstration of the closed glove gowning technique was provided on the stage. This technique once it is mastered is an invaluable skill to the dental nurse.

There was an informative question and answer session with the speakers where we all learnt that Georgina would be giving us a practical gowning session on the following day with gowns kindly provided by CICS.

ADI Members National Forum and AGM

Guy's Campus, Kings College University, London
Saturday 30 October 2004

The ADI organised its first national **Members Forum** in response to an increasing awareness that there was considerable talent and expertise within its own membership that could be harnessed for the benefit of other ADI members.

A call for papers resulted in a very positive response from clinicians and technicians willing to share their experiences with their peers on a central UK platform. 26 wide-ranging topics were split into two parallel streams roughly based on surgical or prosthetic content. All gave a 20 minute powerpoint presentation to elaborate their points.

The Committee are indebted to all 27 speakers who gave up their time to take part in this very successful inaugural meeting.

NOW CALLING FOR PAPERS

The ADI is now calling for all members, especially those who have not necessarily lectured before, to submit a presentation for the **2006 Members Forum**. (Submission form enclosed in this Newsletter).

The **2006 Members Forum** will take place at the same venue (FULL POWER GUARANTEED!) on **Saturday 11 March**.

All ADI members are urged to submit a topic that they feel could be shared with their peers in a friendly informative environment so prevalent in 2004.

Saturday 30 October 2004

Speakers had kindly sent in their power point presentations **IN ADVANCE** to be installed on the main computers. **There was a first!**

Guy's A/V technicians had rehearsed all week to ensure a seamless operation transmitting 26 presentations in one day. The staff and President arrived at dawn in eager anticipation of the busy day ahead. Nothing was amiss. Until around 0730 when the University staff began to test equipment. It seemed strangely dark. Ominously dark throughout the complex. Dark it was - and dark it remained..... for what seemed like hours. (Well it was at least 2!) **Guy's Hospital** immediately opposite was blacked out- emergency generators were grinding into operation. 27 anxious speakers started to arrive to prepare their talks. Delegates poured in the door. The President wondered if he was in the **Black Hole of Calcutta**. A/V technicians stood helpless.

As the minutes ticked by it was patently obvious that the meticulous planning to accommodate 26 presentations in one day was in severe danger of going completely awol. Then a kind of Dunkerque spirit emerged. Not one delegate became angry - everybody sipped yet more coffee trolleyed in from where there was power. Members found old friends in common, lots of groups huddled chatting in the sunlight outside. **Nobody left**. Custodians of the building disappeared whilst ADI staff tried to find out what was happening. **POWER FAILURE** was the only answer from the many men in overalls scurrying round the hospital.

Just when all seemed completely doomed, there suddenly was **LIGHT** and a scramble for the twin lecture theatre seats. **Paul Stone's** face quickly changed colour - he leaped to the platform to open the **Forum** to a huge round of applause from nearly 300 members. However the problems were far from over. The main frame computers had been affected by power surges. All their rehearsed work was wasted. Speakers helped each other lending laptops, copying discs. Chairmen of sessions juggled the timings so no speaker missed out 'entirely'! **Steve Byfield** and **Wayne Williams** deserved the VC for their efforts to get the show on the road.

It could have been a brilliant day - it almost was. Delegates were generous in their evaluations and feedback.

It certainly showed that ADI members have a marvellous spirit and that in spite of the problems, a high percentage of the ADI membership greatly valued both the implant education offered and the 'esprit de corps' on a dark Saturday in October.

ADI Committee members, **Adrian Binney, Steve Byfield, Graham Murray** and **Vinod Joshi** kindly penned the following notes for those members not able to attend.

These are brief reports but all speakers would be happy to answer any email enquiries directly from members regarding their presentations.

FORUM A : Morning Session

Forum A Morning Session
Chairman : **PHIL BENNETT**

Paul Stone
Buccal Bone - Who Needs It?

- "Tissue is the issue but the bone sets the tone" D. Garber
- Blood supply reduced at extraction, angiogenesis leads to bone resorption
- Ideally have 2-3mm buccal bone
- Place implant more palatally to gain bone width buccally
- Large diameter implants don't stop resorption
- Infra-bony defect of 2mm between buccal bone and implant will fill in

Cemal Ucer**The Factors Affecting the Success Rate of Implants Placed in Block Grafts**

- Bone quality is major factor for implant success
- Block grafts resorb and incorporate slowly (12 months)
- At 46 months dead bone therefore implants placed into dead bone! Good primary stability but long wait for osseointegration
- 20% higher failure rate for simultaneous placements..better results for deferred placements

CONCLUSION... Autogenous bone grafting is a definite risk factor in implant therapy

- Reduced skeletal bone density (BMD) is major factor affecting implant success....measured in forearm
- Osteoporosis not contra-indication to osseointegration

RECOMMENDATIONS

- flapless implant placement
- bicortical placement
- staged placement
- caution in grafted areas..careful treatment planning
- care with temporisation

Massoud Hosseini Ardehali**A new Flap to Augment Upper Incisor Implants**

- Many problems with reduced bone levels in implant sites
- Allografts, autografts and ridge expansion all help
- Suggests raising buccal flap (palato-crestal incision) with fragment of vital bone attached to apical part of flap, advancing the flap by undermining it and then extending the useful bone from the apical to the crestal area... the flap becomes wider in the papillary areas too. 85% of the bone blood supply comes from the periosteum and the bone remains attached to periosteum.

Potential problems-loss of sulcus height

- difficult procedure
- loss of apical bone
- initial stability

Koray Feran**Pitfalls and Solutions in Implant Dentistry**

- Implants in the wrong position will always integrate well !!
- When all you have is a hammer everything looks like a nail !!
- You can never have too much info when treatment planning
- Implants too close together will lead to bone loss.. (The biologic doughnut!)
- Try narrow neck implants
- Keep abutment narrower than implant.. (platform switching)...gives more soft tissue to play with too
- Pre-op photos are good
- Discuss your problems with others... we can all learn from each other's mistakes !!

Stephen Barter**Management of Extraction Sockets**

- 4 months following extraction expect loss of 50-70% horizontal buccal bone and 1mm vertical height
- Buccal plate resorbs more than lingual plate
- Place implant in correct 3D position
- 2mm horizontal defect will fill-in
- If we don't place an implant we lose bone
- If we place an implant we may lose bone !
- Immediate implant technically difficult procedure
- May be better delayed immediate placement at 6 weeks (ITI Consensus Conference 2003)
- Soft tissue will always follow hard tissue which resorbs over time
- Soft tissue problems require difficult re-treatment

Rahul Doshi and Ashish Parmar**Smile Design and Implant Related Cases**

- If you want to change people's lives give them a beautiful smile
- Bone expansion techniques can be successful in 1-2mm ridges
- Try to use small or no flap techniques to maintain blood supply
- Sinus lifting to avoid sinus grafting
- Smile design...follow the golden proportions..width:length ratio... 8:10

- Canine : Lateral : Central 1.6 : 1.0 : 0.6
- Axial inclination 5 degrees to vertical....left and right sides symmetrical
- Gingival height symmetry (Gingival Zenith)
- Tips of teeth follow lip lines
- Allow for buccal corridor
- Try to exceed your and the patients expectations in everything you do

Nadir Khan

Bone Grafting

- Ridge splitting, augmentation, distraction, bone traps, bone shavings
- Ramus graft..good access,volume and thickness..low morbidity
- Chin graft..morbidity to lower incisors (monitor vitality), wound breakdown (pressure bandage 24 hrs)
- Intra-oral graft preferable to extra-oral,,endochondral bone resorbs quicker than intramembranous
- Place block graft in direct contact with host bone
- Create vascular channels
- Screw fixation..one screw countersunk...11mm gives good stability..no need for membranes
- Periosteal release gives 10mm more movement and tension free closure
- Layered closure in chin graft....mentalis muscle..harvest bone 5mm below teeth apices
- Curved osteotomes to remove blocks..shape blocks before fixation...no sharp edges
- Leave grafts for 4 months...stab incision to remove screws

FORUM A : Afternoon Session

Chairman: PAUL STONE

Jonathon Schofield

Soft tissues aesthetics around implants

Jonathon tries not to include the papilla in flap design to help retain interdental bone and thereby retains the papilla long term. He recommends over correction of both hard and soft tissue during augmentations to allow for resorption.

Jonathon recommends tension free primary closure and the use of an undersized tissue punch at second stage. By using this technique he rarely finds the need for provisional crowns.

He rarely carries out immediate implants and allows 6-8 weeks healing to allow predictable healing and contour of the soft tissues. Jonathon recommends placing the contact area within 5mm of the bone crest as per Tarnow's paper. Jonathon recommends that where an implant is placed next to an existing crown it is replaced during the implant crown construction to allow symmetrical control of the contact area.

Jonathon advocates using small implants when replacing adjacent implants to gain inter implant space and thereby help to retain crestal bone. He also recommends two implants to restore three units, to prevent the close proximity of implants particularly in the anterior region. He uses a provisional bridge in these cases and an ovate pontic to assist in the development of a pseudo papilla.

Geoffrey Pullen

What's so Special about Initial Stability?

Geoffrey Pullen talked of his experiences with finned implants over the past 7 years. He described and illustrated three types of surgical techniques, two stage, one stage with healing abutments and immediate extraction, placement and provisionalisation.

As opposed to implants that have a threaded outer surface, so designed to improve chances of immediate stability in bone, finned implants only contact the prepared bone of the osteotomy at the outer edges of the fins. Depending on the bone quality, some finned implants are stable on insertion, some are not. Degrees of stability are varied.

His experience of over 900 implants placed and restored into bone of varying quality was described. Bone at implant sites were categorised based on the bone collecting on the flutes of the reamer burs during preparation of the osteotomy. Apart from during the initial drilling of the pilot hole, the osteotomy burs were used at very slow speeds with no irrigation.

The overall failure rate of the implants was 3.7%. The highest failure rate was in the densest bone, where the initial stability was actually the highest. No implants had failed in grafted bone where failure is frequently reported. Many implants were placed into immediate extractions and then restored with provisional crowns. These crowns were bonded to adjacent teeth to provided stability. None of these implants had failed.

Dr. Pullen is convinced that the stability of the implant is important to correct healing but that this stability does not and often cannot come from the bone of the osteotomy, as this bone will soften as part of the healing process. It is more important that stability is achieved by care of the healing site by protecting the implant from movement by several means.

He illustrated his argument with slides prepared by Dr Paulo Coelho, who had given the London ADI study club a talk earlier in the year on implant surface characteristics. Dr. Coelho is one of many workers in the field who describe the initial contact over the entire surface of a threaded implant as appositional bone. This bone forms slowly and is initially quite weak.

The spaces between fins however fill rapidly with callus that forms close to 100x faster than appositional bone. The differences in these two types of healing probably accounts for the high success rates in finned implants, despite their often lack of initial stability.



Lloyd Searson
Rationalising Implant Dentistry

Lloyd stressed that implantology embraces a number of disciplines of dentistry from restorative and periodontal to orthodontic and paediatric. He stressed the challenge of replacing a tooth with titanium implant rather than using complex dentistry.

He described that a titanium alloy was stronger than pure titanium allowing thinner implants however the disadvantage was a lower BIC, on balance he prefers pure titanium. Lloyd also recommends a direct drive threaded implant over a smooth implant due the increased primary stability.

Lloyd discussed the advantage of a modified surface achieving a greater BIC however he mentioned that in the case of the HA surface it shows less successful long-term results.

He did not consider the use of internal coolant drills of any advantage over the external coolant drills. Lloyd recommended internal connection over external for eases of abutment connection.

Lloyd recommends custom abutments over machined flat platform in areas of variable marginal height to avoid deep interproximal margins, which can allow cement to remain after crown placement.

Other aspects of his favourable abutment design are the use of a non-friction grip abutment to allow retrievability and the ability to use the same abutment on different platform widths by having the same internal connection. He discussed the advantage of a variable healing abutment height

Lloyd stressed the need for inexperienced dentists to avoid immediate loading and where possible all implantologists should avoid implant tooth connection.

He prefers cement retained prosthesis in the anterior to avoid thick palatal surfaces and screw retained in the posterior for retrievability.

Lloyd closed by recommended the of a new plastic preformed burn out custom abutment for the laboratory.

Anthony Bendkowski
Basic Principles of Distraction Osteogenesis

Ben stressed the need for a plethora of options for bone management in implant dentistry from the carefully managed bone trap through to the use of extra oral sites. Ben prefers the use of the term augmentation to grafting, he considers this to be more patient friendly and a more accurate description of what we want to achieve.

Distraction Osteogenesis is indicated in three areas

1. Treatment of partial ridge defects
2. Atrophic bone ridge in both maxilla and mandible
3. Orthodontics in the movement of dentate sections

There are four basic stages

1. Placement of the distractor.

Ben recommended the use of 12mm distractors, which have the option of cutting them down rather than the use of a short distractor, which may be inadequate for the case once activated.

A single incision is made without relieving incisions. The distractor is adjusted to fit the bone and holes are drilled to allow for a trial positioning prior to bone sectioning. The occlusion needs to be considered when deciding the positioning to avoid fouling on the opposing teeth.

The bone is then sectioned using horizontal and vertical cuts. It is imperative that the free bone section remains attached to the palatal or lingual mucosa, as this is the only source of blood supply. The distractor is then positioned using the pre-drilled holes.

The distractor transport section is tested to ensure that the free bone section does not foul on the walls as it is opened.

2. Latency.

It is important to leave the site to heal following placement for at least a week to prevent wound dehiscence during activation.

3. Distraction.

Distraction will allow 1mm of bone growth per day by turning the distractor twice a day. Soft tissue gain will occur at the same rate as bone gain.

4. Consolidation.

Ben considers 12 weeks to be an optimum time in his hands for consolidation to occur where the distractor is left in situ and not activated. This period is followed by implant placement at the same time as distractor removal. The bone generated is woven and requires maturation while the implants are integrating.

Ben described that by working with vital bone he found low infection problems and there does not seem to be a problem of resorption with alveolar distracted bone. The main advantage is the soft tissue gain.



Jason Buglass

Use of Titanium Mesh in Grafting Procedures

Mesh is available in various types. Jason recommended a varied sized mesh, which has two sizes of holes to allow different types of screws to be used. His preference is the use of round holed mesh, which is simpler to remove, as it is less prone to become engaged into the bone.

Three different thicknesses

0.1mm flexible

0.2mm moderate rigidity

0.3mm rigid

The function of the mesh is to prevent the ingress of soft tissue in to the augmented site. The mesh is fixed with appropriate screws. Barrier membranes are not always required. A second stage is required to remove the mesh and should not be left in situ.

To reduce the amount of resorption of block grafts up to 40% loss of bone can occur with a graft alone. A thinner mesh is ideal where little support is required. In cases where rigidity is required such as with a particulate graft a more rigid mesh is required.

Mesh can be used to gain both horizontal and vertical augmentation. The mesh can be covered with either a PTFE or collagen membrane. The disadvantage of the PTFE is the risk of infection if wound dehiscence occurs with the possibility of loss of the whole graft. Collagen membranes can under go early resorption and limit the benefit of their use.

The use of mesh in horizontal augmentation is more debatable due to the existence of other more simpler and predictable procedures with the exception of a 4-walled defect where there is no bone plate to attach your onlay or particulate graft.

Jason finds that the use of mesh avoids the need for a block graft and the morbidity to the donor site. In his experience the risk of mesh exposure is high at 50% and can be alarming to the patient however he considers that the existence of exposure does not tend to have an effect on outcome.

Jason prefers to form the mesh at operation rather than using a study model because the thickness of soft tissue can vary. An accurate method would be by using a stereo lithography model from a CT scan.

He recommended opening the site and relieving the periostium. He places great importance on tension free closure to try and prevent a wound dehiscence. The mesh is selected trimmed and shaped. Jason finds that drilling holes for screw placement after block graft placement easier than trying to find pre drilled holes, however he does recommend drilling a block fixation hole in the graft site prior to removal. In the case of a particulate graft he prefers to attach the rigid mesh and pack the particulate graft under the mesh. Jason recommends when placing mesh to ensure that there are not any sharp corners, which can penetrate the tissue.

The second stage removal of the mesh can be very difficult especially when there has been mesh exposure. The mesh is separated from the soft tissue using sharp dissection accepting some tears, which require suturing. It is important to leave the graft for enough time to allow bone maturation

To avoid the possibility bone which has become engaged in the mesh lifting the graft from the recipient site he prefers the use of round holed mesh. As the mucosa is lifted or separated from the mesh the result is what tends to be a split thickness flap with the periostium beneath the mesh. He recommends that the implants are placed through this jelly like layer, which is the developing periostium, and the flap closed thereby reducing the possibility of bone resorption. Soft tissue augmentation can be carried out at this stage to achieve the necessary soft tissue contour and allow closure with an appropriate width of keratinized mucosa.

Ashok Sethi

Reconstruction of the alveolar ridge

Ashok classified bone loss in the alveolar ridge as follows

1. Width
2. Height
3. Height and width

Ashok suggested that the symphysis could be used for all the above classifications however Class three with greater difficulties, due to the shape of the graft that could be obtained. He recommends radiographic monitoring to ensure healing has occurred. If no membrane is used he would normally leave the graft for 2-3 months. With a resorbable membrane 4 months and non-resorbable 4-6 months.

Following implant placement he would normally wait 6 months before carrying out second stage care attaching the abutment at the time of surgery and waiting a further month before commencing the prosthetic stage.

The symphysis and the ramus can provide enough bone for four implants to graft height or width and for two implants for height and width. Ashok prefers the retro molar area for height and width because the "J" shaped graft can be inverted and fixed to the recipient site in one piece.

Cancellous bone is used to fill the small spaces. Ashok stressed that the only blood supply to the donor site when a membrane is used is from the recipient site. The membrane has the advantage of reducing the donor graft resorption. He recommends at least a 20% over build to allow for resorption.

At the time of implant placement Ashok tests the graft for vascularity and avoids the use of bone expanders, which may separate the graft from the donor site.

Ashok does not recommend soft tissue augmentation at the same time as bone augmentation he prefers to wait 2 months after implant placement until some revascularisation has occurred. Further soft tissue management is carried out with the provisionals. The finals are placed 1 month after the desired result is achieved.

Ashok described the treatment of 3 classifications of the atrophic jaw based on Cawood and Howell's Classification).

IV loss of 3-4 mm alveolar bone height with loss of bone width

V All alveolar bone is lost and basal bone is remaining

VI Much of the basal bone is lost

In cases requiring greater bone volumes his preferred donor site is the iliac crest.

Type IV

Ashok was in favour of building width in narrow ridges rather than reducing them to gain a wider platform, to achieve better aesthetic and biomechanical results.

Following grafting he uses a CT scan and **Simplant Software** to manage the positioning and guidance of the implants. The implants are left unloaded for 6 months and the case completed using indices from pre operative try ins. The protocol involves selecting an abutment using a Diagnostic template, seating it at the time of second stage surgery and basing the transitional and definitive restorations on the Diagnostic preview.

Type V

In the Mandible Ashok recommend the use of lateral nerve transposition in these cases with the use of cement retained prostheses to eliminate the risk of static loads found in screw retained cases and the need for frequently removing the abutments. Implants are left unloaded and the case completed as above. Class V maxillas are treated using block bone grafts.

Type VI

Ashok recommended the use of lateral nerve transposition and onlay grafts in the mandible and block grafts in the maxilla. He stressed that these cases are the most demanding of all. Again the implants are left unloaded for 6 months and the case completed as above.

FORUM B : Morning Session

Chairman: ADRIAN BINNEY

Sharam Tabibi

Patient Assessment and In-depth Planning

Sharam stressed that the initial consultation was to elicit the patient's needs and the need for an in-depth consultation at which a full consultation would lead to the presentation of a treatment plan and report.

The lecture also introduced the Dental Implant Course that he conducted at the University of Central Lancashire in Preston.

Steven Byfield

Integrating Implants into Treatment Plans

Steve suggested that Implants are a tool in the tool box of the dentist and should be considered as part of a treatment plan and not the only focus. The brain is the master diagnostic and planning tool. The patient's expectations should be identified in the early stages.

If they are not realistic, the patient should be educated accordingly.

The clinician should remember that they can decline treatment if the patient's expectations fall outside what is realistically attainable.

The treatment plan should be staged to ensure control of the outcome.

The right diagnosis and treatment plan, an understanding of occlusion and the periodontium were important to achieving successful complex restorative care.

Post operative monitoring and review were as important as carrying out the treatment.

Colin Cook

Radiology in Implant Planning

Colin started by recapping the essential diagnostic information required for treatment planning and how radiography could provide this.

He discussed current recommendations on levels of imaging and selection criteria suggested by the **European Association of Osseointegration** and the **Faculty of General Dental Practitioners**.



The advent of new technology, specifically cone beam volumetric tomography, was a way of gaining CT quality imaging at a radiation dose equivalent to 2-3 DPTs and less than that from a full mouth series of periapicals.

Several types of equipment, including Newtom 9000 DVT unit were discussed .

Neil Attenborough
Drill Guide Construction Techniques

Neil made a dull subject interesting by using humorous quotations and comments about how the non-use of a drill guide could result in inadvertent lip support!

He gave a review of drill guides used over the years and how hindsight now made them seem misguided. The benefits of using a drill guide, even by an experienced surgeon, were well illustrated with case reports.

The use of accurately fabricated sequential drill guides allowed the accurate placement of implants and improved the predictability of the outcome of the planning.

Wayne Williams
Screws vs Cemented Retained Prosthetic Design

Wayne gave a very well referenced lecture on 'Screw vs Cemented Prosthetic design'.

He started off by saying that one approach was simply not better than the other as there were potential advantages and disadvantages of each. Screw had initially been used to allow retrievability.

The history of screw retention revealed how the success and failure of early screws had resulted in improvements of fit, understanding of the need to pre-load, etc. These modifications had resulted in improved screw success.

Gold screws were now preferred to titanium.

There could be problems with screw access in the posterior of the mouth. Concerns had been raised about the micro-gap and microflora it encouraged. To overcome these problems, screws had been used for indirect retention in conjunction with cemented prostheses.

Occlusal screw holes could not only compromise aesthetics but also compromise the ability to deliver precise occlusal contacts. However, the delivery of a cemented restoration was more complex owing to the need to avoid trapping residual cement subgingivally with attendant inflammation.

Point 1

Classification

direct retention of implant supported prostheses is achieved by means of

- 1. screws - vertical or horizontal
- 2. cement - permanent or 'temporary' (provisional)
- 3. screws and cement (combined retention)
- - vertical screw (including direct abutment)
- - horizontal screw indirect retention

- 1. clips
- 2. ball attachments
- 3. magnets
- 4. combined indirect retention

combined direct and indirect retention

Point 2

•comprehensive critical review (122 references) Michalakakis K, Hirayama H & Garefis P, IJOMI (2003);18(5):719-728

Point 3

Conclusions

- various implant retentive design options are available
- retentive design should be planned
- operator preference appears to influence retentive design choice
- ongoing development/ research will influence future trends
- further research is required into cement retained designs
- all current design options have advantages and disadvantages
- should be aware of limitations and disadvantages for each design
- select most appropriate design for each given case

Eddie Scher
Risk Management to Increase Predictability in Implant Dentistry

Eddie quoted a VA study that had showed that the number of failures increased two-fold with inexperienced surgeons. There was a learning curve and he had several tips for both the inexperienced surgeon and prosthodontist:-

- a CT scan should always be taken if doing a sinus graft procedure.
- recommended the use of internal as well as external irrigation during drilling.
- make the retention screw hole before removing a chin onlay block graft or to use a bone block clamp!
- the use of 2 suction tips when using a bone trap to collect bone for grafting to avoid contamination, and then mixing the harvested bone with PRP
- during the prosthodontic phase, it was important to thoroughly sterilise healing abutments if they were to be reused!
- the healing abutment should be coated with Corsodyl gel to ensure good epithelial healing around it.



Gary Hills**The Biology of Immediate Loading**

Gary was the last speaker for the morning and spoke on the 'Biology of Immediate Loading.' It was a pity that his well-prepared 30-minute lecture had to be 'bastardised' owing to the reduced time available and early problems with the AV.

He still gave a great humorous lecture on the 'Fundamentals of Implant Dentistry', and his training in implant dentistry, the Diploma course of the FGDP, showed that it had given him a great understanding.

He emphasised that the healing process of bone was the most important factor influencing success of immediate implant dentistry.

Patient demands were tending to drive implant dentistry and there was a danger of forgetting the limits placed by bone biology. While woven bone was formed against the implant surface in six weeks, it was not loadable. Research was trying to meet patient demands by reducing healing times through improved surface treatments.

He advised caution about manufacturer's claims in the light of the disaster with HA coatings and advised weight only being given to articles in well-refereed journals. Some of his sound clips and quips had the audience in hysterics of laughter. His 20-minute talk convinced me that we should hear from him again.

FORUM B : Afternoon Session**Chairman: VINOD JOSHI****Paul Tipton****Full Arch Implant Supported Bridgework**

Paul outlined the main problem when tackling full arch bridgework: that of fit. With a thorough range of detailed clinical cases he demonstrated how to overcome the main problems with fit in full arch bridgework, i.e. impression taking, casting shrinking and shrinkage during porcelain fitting.

Paul advised that for reasons of increased predictability and passivity, cemented restorations are preferable. Additionally because the access for the implant screw is invariably at or on the centric stop, cemented restorations are preferred. Screw retained bridgework provides a less than ideal material to provide a long term stable occlusion. Occlusal wear is inevitable which leads to alteration in guidance and as a consequence stress focus, this can lead to failure of porcelain and/or metal work.

He advised for reasons of maintenance that night guards are advisable to prevent wear and damage to fixed bridgework, they prevent muscular problems in the bruxist. Bruxing is to a certain extent inevitable in these patients as they have no proprio-reception to provide the muscular feedback to prevent excessive forces building up thus making damage to the bridgework more likely.

Paul outlined in detail with beautiful slides, three cases where the **Peter Wolf bridge** was used to provide a cemented full arch of bridgework. The design of a one piece metal sub frame fixed with pink porcelain on which individual metal ceramic crowns are cemented, this bridge offers a number of advantages. Notably control of the porcelain and consequently better aesthetics, improved fit of the whole structure and the opportunity to individually replace crowns if required.

Paul took us through the individual stages of impression taking, metal copings, pick up and metal try in, followed by positioning of individual crowns. All cemented together to provide an aesthetic, passive, cemented metal ceramic bridge.

Paul advocated a careful protocol to produce these accurate bridges but notes that they were time consuming, both for the clinician and technician, with the associated costs. These have to be taken into account when planning, patient consent and the implant placement is undertaken.

Larry Browne**Technical Aspects of Dental implant Restoration**

Larry focussed his presentation on how to aid the implant surgeon predictably positioning the shoulder of the implant. He explained that, if technicians are to provide immediate bridgework to fit on implants, then they to accurately understand the position of the implant head in 3 dimensions otherwise bridgework of crowns would not be accurate with consequences on occlusal forces/aesthetics and healing time.

Larry began with the aid of clinical and technical cases to outline the obstacles to predicting the head of the implant and advised that all cases should be carefully planned and implants positioned with the aid of a surgical stent.

Larry went on to advocate and detail the construction of the Higginbottom template as an accurate method of positioning of the dental implant. Once positioned in the planned manner, an immediate pre-constructed bridge could be used with confidence and without the risk of causing major problems.

This enabled ideal healing of the implant in addition to good function for the patient and lead to an ideal final aesthetic result.

Larry concluded by encouraging all clinicians to work with their dental technician colleagues and utilise surgical stents to aid the positioning of their dental implants.

Sharad Patel

Soft Tissue and Aesthetics in Implant Dentistry

Sharad focussed his presentation on outlining a journey which should be undertaken in order to ensure good long term results. He began by detailing, with the aid of neat clinical slides, the necessary considerations required when undertaking a dental implant reconstruction. He subdivided the problems into those of hard and those of soft tissue, detailing further the sub-categories as he saw them and their associated problems.

In scalloped/thin periodontia he advised that prophylactic tissue grafts may be required to ensure good soft tissue profiles are achieved. In thick/fat periodontia the problems can be that scarring occurring, or papillae can be foreshortened, and lead to an in-aesthetic result.

In both small volume and large volume soft tissue defects, Sharad advised that careful assessment and correction of the defect were necessary before implant placement was often preferable to provide a predictable aesthetic and functional result.

Sharad detailed with accurate clinical slides the modified palatal roll technique for soft tissue recontouring, additionally, he chronicled a mobilised soft tissue flap for larger defects.

When addressing hard tissue defects he carefully set out a detailed protocol focussed on predictable long term results. He was careful to advise that even small hard tissue defects sometimes also require a corrective soft tissue graft to provide a good aesthetic result in addition to bony reconstruction. When tackling large hard tissue defects, Sharad pointed out a staged approach is required when a process of interim temporary restorations, block bone grafts and bone regeneration was preferable to achieve good long term results. A stage of modified provisional temporary restorations will be required and finally correction of the soft tissue contour. These stages are advisable if good long term aesthetics are to be achieved and before the ideal implant position can be achieved.

Sharad details a number of cases where these careful guidelines had enabled him to achieve good long term results in difficult situations demonstrating with clear clinical slides each case in turn.

Tariq Idris

Mini Dental Implants

Tariq introduced himself as a general practitioner with experience in mini and midi implants. He aimed to cover the role of these implants and emphasised that this was his personal view.

He set out to outline a number of cases and new developments in this field. Tariq emphasised that this initially began as a controversial area but is now moving into the main stream. Tariq outlined that dental implants and grafting procedures are an invasive procedure and should be explained from a patient's point of view. At the other end of the scale are complete dentures which can work well for some patients although for others they can give extensive problems. Tariq pointed out that those patients who suffer with dentures can still have limits such as financial and emotional to the restoration with conventional dental implants. Patients who wish to avoid grafting and the associated surgery or wish to consider alternatives for financial reasons are where mini implants can help.

Historically New York dentist Victor Sendax has been using mini implants for 25 years, often to salvage a failing bridge. His experience was that these bridges worked for 10-15 years although there was no scientific back-up. Recently in the USA these implants have received FDA approval. Tariq cautioned that there are no long term studies although there are some short term studies available now of around 3 year duration where success rates were high (97%).

The implants are 2-8mm in diameter of different length and different designs. The surface can be polished; these are usually for temporary use, or etched surface, which are for permanent use. They are made of titanium alloy and are all-in-one design with different designs on the coronal end.

These implants do offer advantages such as minimally invasive flapless surgery and they can also be significantly lower in cost. They are self-tapping, offer a good stability and can often be immediately loaded. Additionally, since they are smaller in diameter, they can avoid grafting. They are very consumer friendly.

He outlined their role as an alternative when the patient has limitations of bone, finances or local anatomy. This offers a second opinion. It is an alternative rather than a replacement and it cannot be considered on the same level of quality as more advanced procedures. It is an alternative to dentures. The ideal case is when used to stabilise a lower complete denture. He outlined in detail a lower overdenture case stabilised on four mini implants carried out over a morning.

Tariq emphasised that, as always, planning is just as important as with conventional dental implants. Tariq went on to outline the procedure in detail, emphasising that the mini implant does not need an osteotomy site.

Studies have confirmed that the implants do osseointegrate. However, Tariq emphasised they can be fractured if excessive force is used. To conclude, they are low morbidity and quick, which is very appealing to the patient.

Tariq further emphasised there are no long-term studies but in his experience he is seeing good results.

The complications were outlined, fractures can occur as they are small in diameter, this can happen at any time in surgery or wear. Fracture of the prosthesis can occur. In limited bone and type four bone, Tariq has observed these have problems in his use of the mini implant.

Finally, Tariq outlined the new design of self-tapping implants up to 4.3mm diameter which offers greater strength although an additional core is required. When positioning these implants, the initial fixture of these implants is far superior, additionally as the implant enters the bone it expands and condenses the bone which is advantageous to aesthetics.

Tariq concluded by detailing cases using these wider implants showing bone and soft tissue expansion with the associated aesthetic improvements. Tariq concluded by confirming that these mini implants are based on sound surgical principles and offer an alternative to conventional dental implants.

Gareth Jenkins

Precision Attachments and Dental Implants

Gareth began by thanking the committee for supporting his idea of a **Forum** for UK national members and bringing it to fruition today.

He noted he had been using precision attachments for over 30 years giving his patients a wider choice of treatment options in cases with or without dental implants.

Gareth aimed to give us an overview of attachments used with implants and the advantages they offer. He began with a clinical care of an overdenture supported on dental implants. Gareth explained attachments offered an option to avoid unfavourable forces being applied to implants. He also emphasised the advantage of splinting teeth and implants together, for strength and also to counter occlusal forces. The force should ideally be in the line of the long axis of the tooth if we want the tooth to move under occlusal forces correctly.

He showed many clear slides outlining the cases as he presented them, carefully talking us through each one of them. He noted that the precision attachments offer us the ability to remove units for access to the underlying tissues. Gareth echoed Steve Byfield by emphasising the need for good balance in occlusion, both laterally and in protrusive movements. He pointed out that by splinting implants together, damaging lateral forces are avoided.

Gareth went on to demonstrate the use of screws to overcome angulation problems. They are very inexpensive and also very useful. Again, many excellent clinical photographs were used to demonstrate a case where a screw and tube helped with the restoration of a full arch. Additionally, he demonstrated the design and technical aspects of using such screws. He emphasised the aesthetic advantage, as very little metal is on show.

He went on to demonstrate several clinical cases, pointing out where precision attachments linked to dental implants avoid advanced grafting, further dental implants, or repositioning of nerves which otherwise would be necessary, explaining that this was one of the main advantages in using precision attachments. He outlined the added advantage of using precision attachments; they take account for the flex of the mandible which is reported to be up to 2mm. This allows stress breaking when linking a full arch is necessary. He detailed with slides the use of the screw and tube, roach, dalbo precision attachments, in a variety of clinical situations.

When using precision attachments Gareth explained the need for good temporisation which is carefully equilibrated. Using several cases as examples using implants and teeth Gareth took us through the principles of restoration of full mouth, advising the need to stick to basic principles of freeway space, balanced occlusion even centric and monitoring the joints and muscles for symptoms.

Gareth went on to outline his implant practice stating that he early loads 80-85% of implants at 6-8 weeks. He emphasised he looks for at least 11.5mm length implants at 45 NCm² torque to ensure the loading at 6-8 weeks is successful.

He concluded by outlining a series of cases where full arches can be restored utilising dental implants in the anterior jaw and a precision attachment posteriorly. This provides good long-term results and avoids the need for sinus grafting and bone grafting. He referred interested colleagues to his text book from Quintessence. He outlined several cases in slides, taking the audience through each stage in detail.

Basil Mizrahi

Mini Orthodontic Implants - Useful Aids for the Orthodontist and Restorative Dentist

Basil Mizrahi gave a talk on Micro Orthodontic Implants, which are a new and exciting adjunct to orthodontic treatment. These micro screws are similar to bone plating screws, and are about 1.5mm in diameter.

The big advantage is that they can be immediately loaded with orthodontic forces. In addition, unlike conventional osseointegrated implants, these micro implants can be placed in areas where teeth are present. They can be placed between the roots of adjacent teeth, buccally or palatally. Placement technique is very simple and they are placed through the overlying mucosa.

Complicating factors include screw-loosening and/or damage to the tooth roots. To date, Dr Mizrahi had placed over 45 of these with a success rate of about 85%.

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Astra Tech T: 01453 791761 F: 01453 791001 www.astratechuk.com	Image Diagnostic Technology T: 020 86003540 F: 020 86003549 www.ctscan.co.uk
Attachments International T: 01386 561845 F: 01386 555177 www.attachments.com	3i Implant Innovations T: 01628 829314 F: 01628820182 www.3i-online.com
Attenborough Dental Laboratories T: 0115 9473562 F: 0115 9509086 www.attenborough.com	Implant Solutions T: 0870 720 2180 F: 0870 720 2190 www.implantologysolutions.com
Bicon Dental Implants T: 01473 829299 F: 01473 828314 www.bicon.co.uk	Inion T: 07831 178513 F: 01825 750661 www.inion.com
Bien-Air UK T: 01306 711303 F: 01306 711444 www.bienair.com	Innova UK T: 01386 561845 F: 01386 555177 www.innovalife.com
BioHorizons UK T: 0118 9735100 F: 0118 9735066 www.biohorizonsuk.com	MDIS T: 01782 771212 F: 07813 911372
Biolase Technology T: 1-949-226-8147 / +49-9603-808200 F: 1-949-361-4394 www.biolase.com	Molar T: 01934 710022 F: 01934 710033 www.molarltd.co.uk
British Dental Hygienists' Association T: 0870 2430752 F: 0870 8430752 www.bdha.org.uk	Neoss T: 01423 817733 F: 01423 817744 www.neoss.com
Ceramic Systems T: 08450 700137 F: 01932 577043 www.ceramicsystems.co.uk	Nobel Biocare T: 01895 430650 F: 01895 430636 www.nobelbiocare.com
C.I.C.S. T: 020 7724 7008 F: 020 7723 9674 E: cics@globalnet.co.uk	Oral-B T: 020 8847 7817 F: 020 8847 7828 www.oralb.com
Coltène Whaledent Freephone: 0500 295 454 F: 01444 870640 www.coltenewhaledent.com	Oraldent T: 01480 862080 F: 01480 862083 www.oraldent.co.uk
Dental Care Finance T: 01727 875459 F: 01727 874899 E: briancarter@btinternet.com	OsteoCare T: 01753 770006 F: 01753 770009 www.osteocare.uk.com
DENTS (TEAMWORK MEDIA UK) T: 020 72482182 F: 020 72482183 www.dentalexcellencetech.com	Osteo-Ti T: 01481 241117 F: 01481 241078 www.osteoti.com
Dentalyse T: 0151 4721455 F: 0151 9441332 www.mastgrp.com/www.dentalyse.com	Panadent T: 01689 881788 F: 01689 881789 www.panadent.net
Dental Technology Services T: 0141 5565619 F: 0141 5519162 www.dts-international.com	Pfizer Consumer Healthcare T: 01245 454459 www.pfizer.co.uk
Dentsply Friadent T: 0161 266 1077 F: 0161 266 1567 www.friadent.de	Philips Oral Healthcare Freephone: 0800 0567222 F: 01483 298859 www.sonicare.co.uk
Dexcel Pharma T: 01327 312266 F: 01327 312262 www.dexcelpharma.co.uk	Prestige Dental T: 01274 721567 F: 01274 304237 www.prestige-dental.co.uk
Discus Dental T: 0800 0323005 F: 0800 0323006 www.discusdental.com	Quintessence Publishing T: 020 8949 6087 F: 020 8336 1484 www.quintpub.co.uk
Europ Assistance T: 01444 444670 F: 01444 416348 www.europ-assistance.co.uk/dental	Rocky Mountain Tissue Bank T: (303) 337 3330 F: (303) 337 9383 www.rmtb.org
FMC T: 0800 371652 F: 01923 851778 www.fmc.co.uk	Sigmacon T: 020 8950 9501 F: 020 8950 9199 E: info@sigmacon.co.uk
Frank Taylor Associates T: 01707 653260 F: 01707 644521 www.ft-associates.com	Smarter Practice T: 01349 862288 F: 01349 864994 www.smarter-practice.com
GC UK T: 01908 218999 F: 01908 218900 www.uk.gceurope.com	Straumann UK T: 01825 760686 F: 01825 760696 www.straumann.com
Geistlich Biomaterials T: 01244 347534 F: 01244 319327 www.geistlich.co.uk	Swallow Dental Supplies T: 01943 604408 F: 01943 604393 E: vicki@swallowdental.co.uk
General Medical T: 01380 734990 F: 01380 739801 www.generalmedical.co.uk	Trycare T: 01274 881044 F: 01274 881045 www.trycare.co.uk
I.C.O.I. T (973) 783 6300 F:(973) 783 1175 www.dentalimplants.com	Ventura-London T: 020 8998 0879 F: 020 8997 0580 E: m@ventura-london.co.uk
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