Implantology - The Camlog Way

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With well over a thousand implant systems currently on the market there is a lot of choice when it comes to picking the right one to put in your practice. After extensive experience with a variety of systems dating back to the mid 1990s, I recently began placing Camlog implants, developed by Dr. Axel Kirsch. The design of this system eliminates the risk of abutment rotation and screw loosening, while at the same time offering extraordinary ease of use.

One of the things that is attractive about the Camlog system is that their surgical kits are organized with a number of fail-safe applications, such as depth guides for all of their drills for osteotomies.

This is particularly useful for those clinicians at an early stage in their implant careers as it assures safety and precision for its users, and is something I find builds a great deal of confidence when I am mentoring.

Another interesting feature is that the implant profiling drills are not end-cutting, so they will only go where you drill the initial osteotomy site and only to the depth of the osteotomy.

Surgery - Benefits at a glance
- One surgical set for both implant systems
- Colour-coded instruments arranged in the surgery set in logical order of use
- Depth stops and laser markings for safe and individual implant bed preparation
- Special design of multiple-use drills foratraumatic, efficient and accurate preparation
- Implant packaging includes cover screw for submerged healing

The prosthetic system is comprehensive and user-friendly. They have a trilobe platform, which is beneficial because it keeps the prosthetic phase simple.

Additionally, the abutments engage the implant internal connection for longer length than most systems, which I feel gives a better connection in the long term and leads to less of a chance of screw loosening.

CAMLOG® Implants
The heart of the CAMLOG® Implant Systems is the innovative implant-to-abutment connection, known as the Tube-in-Tube™. The positive press fit of the highest precision and anti-rotation stability allows the simple and durable prosthetic rehabilitation of single crowns and bridges as well as a secure and lasting screw connection.

As a result of the positive press fit and the specially designed cams of the Tube-in-Tube™ connection, all forces acting on the connection are distributed in an ideal manner. The abutment screws are minimally loaded and only have a holding function. Therefore, screw loosening or screw fractures are practically eliminated. Clinical results confirm these outstanding properties.

Tube-in-Tube™ connection - Benefits at a glance
- Precise, anti-rotational positive locking allows simple and durable prosthetic connections
- 5 grooves (implant) and 5 cams (abutment) enable clear, secure and fast positioning of abutments
- Comparative studies with other well-known implant systems have demonstrated that the CAMLOG® connection yields excellent results for fit and accuracy

CONELOG® Implants
The new CONELOG® implants are equipped with a cone (7.5°) and three grooves in the inner configuration for positioning CONELOG® abutments.

The CONELOG® abutments are apical with a cone and three cams, and lock into the conical connection and the three grooves of the implant. The CONELOG® abutment does not cover the implant shoulder, thereby, offering integrated platform switching. A CONELOG® abutment screw is used to fix CONELOG® abutments in the CONELOG® implant with a defined torque.

Conical Connection - Benefits at a glance
- Precise, self-locking anti-rotational conical implant/abutment connection
- Integrated platform switching
- Proven CAMLOG indexing makes abutment positioning simple, fast and accurate

Implant Surface - Benefits at a glance
- Sand-blasted, acid etched Promote® surface for fast osseointegration
- Six weeks healing time in good bone quality
- Scientifically documented, clinically proven

I am now almost exclusively using Camlog implants in my practice and to date have not encountered a clinical situation in which the implant was unable to fulfill the role necessary.

The following case studies demonstrate the surgical and prosthetic flexibility of the Camlog system, from clinicians who understand the need for a reliable and user-friendly system, and who have adopted the system into their practices.

Case Study 1
This 67-year-old lady was referred to me with a view to replacing her failing upper incisors with dental implants. This was to include replacement of her upper right canine that was lost some time ago and being replaced with a badly designed cantilever bridge.

Her medical history was clear and she had a heavily restored dentition that was otherwise well maintained. Her oral hygiene was excellent.

Following a full clinical and radiographic examination I opted to extract all four incisors with immediate implant placement. In this case, I chose to replace each tooth with a dental implant. Not something I would routinely do, however, I was concerned about the long-term prognosis of some of her upper posterior teeth and this would give me the option of creating a reduced dental arch, with minimal future intervention should the need arise.

The sockets were thoroughly debrided and implant osteotomies were prepared to engage the palatal shelf and ensure good primay stability. All four sites were prepared to receive 3.8mm x 11mm CONELOG® Implants. The implants were placed and covered with the closure screw provided. Any loose Bio-Oss particles and a Bio-Guide membrane were used to stabilise the graft material.

The healing was uneventful and the implants were uncovered after approximately 12 weeks. Large wide body healing caps were inserted to commence site
Following a healing period of approximately three months the patients existing dentures were relined and duplicated to form radiographic stents. This was done using a mixture of 10 per cent-15 per cent Barium Sulphate in the base acrylic and radiopaque teeth (SR Vivo TAC and SR Ortho TAC by Ivoclar Vivadent). The patient was then referred to have CT scans of both jaws.

The digital data obtained from the scans was then used to plan the positions of the Camlog implants and sent to a specialist laboratory for surgical drilling guides (Camlog Guide) to be produced. There was sufficient bone for 6 implants in the upper jaw and 4 interforaminal implants in the lower (Camlog Guide Screw Line Implants, Promote Plus). The laboratory also provided the

development. This was followed by open-tray pick-up impressions two weeks later.

The laboratory produced four cast abutments. These were milled parallel and a five unit fixed porcelain fused to metal bridge was constructed as the definitive restoration. This was cemented in place to achieve an excellent final result.

“I have been placing and restoring CAMLOG implants for several years with great success, due to its precision and simplicity in both the surgical and restorative aspects. The system also offers complete versatility with terrific affordability, without compromise. CAMLOG has well over 10 years history of use and clinical studies to back it up. For my patients, I want to provide the best treatment and materials I can.”

Case Study 2
This lady was presented with advanced periodontal disease affecting all her remaining teeth and was looking for a “fixed solution”. The first stage in the treatment process was to remove all the remaining teeth and provide conventional upper and lower full dentures.

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provisional acrylic bridges to immediately load the implants after placement.

With the planning complete the patient returned for surgery. This was carried out under local anaesthetic, and involved securing the surgical guide with small pre-determined screws followed by preparation of the implant beds with the corresponding guided drills. The upper jaw was completed first, followed by the lower. The provisional acrylic bridges were then secured to the implants.

The provisional bridges were left in situ for approximately six months before being removed and impressions taken for the definitive bridgework. Duralay verification jigs were used to ensure the accuracy of the impressions.

The definitive, screw retained, bridges were constructed from a milled bar overlayed with acrylic. The patient was delighted with the result.

“The CAMLOG system was introduced to me around three-four years ago when I found more and more indications for finding a more economical solution to restoring edentulous arches. After looking into CAMLOG implants and their restorative versatility together with the simple system of placement I trained up on CT guided implant placement and found the guided CAMLOG implants to be of perfect application to my needs.

I now use CAMLOG implants for most of my surgical and restorative cases. My laboratory technician based in California is also very comfortable with the system resulting in superior technical results as well as the simplicity and versatility of placement. It appears to be a well researched and documented system to which I have found the product support to also be very good.”

Case Study 5
This delightful 56-year old lady presented to me complaining that she wasn’t happy with the appearance of her teeth and she couldn’t tolerate wearing dentures. She had had some teeth extracted a short time before and was given a set of immediate partial dentures and was referred to a colleague dentist for a full examination. It was clear that all the remaining teeth needed to be extracted. This was duly carried out and the patient was constructed a set of transitional full upper and lower dentures whilst her mouth was left in situ for approximately six months.

The patient had obvious ongoing issues with her remaining teeth and was referred to a colleague dentist for a full examination. It was clear that all the remaining teeth needed to be extracted. This was duly carried out and the patient was constructed a set of transitional full upper and lower dentures whilst her mouth was left in situ for approximately six months.

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healed. This was a very positive step forward for the patient however she was still experiencing some difficulty retaining her new teeth, especially the lower set.

After a lengthy discussion about her options, she opted to proceed with implant supported overdentures. This traditionally constitutes a minimum of four implants in the maxilla and two in the mandible. This option would also allow me to uncover the patient’s palate and increase her taste and temperature perception.

Four Conelog® Implants were placed in the maxilla and two in the mandible. Even distribution of the maxillary implants is essential to ensure adequate retention and the distribution of occlusal forces.

After a healing period of three months the implants were uncovered and Locator Attachments (Zest Anchors) were torqued on.

This was followed by construction of a new set of implant retained overdentures. 

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By Marc Northover

Marc Northover is considered to be one of the UK’s leading Clinical Dental Technicians, where for the last decade he has worked as an opinion leader on behalf of an international dental organisation, offering master classes and one-to-one mentoring to up and coming Clinical Dental Technicians. Marc regularly teaches on courses for dental professionals in the UK and abroad on his chosen topic of complete dentures and continues to work very closely with the UK’s leading Dentists, Dental Technicians and Clinical Dental Technicians as part of the network of Changing Faces Denture Clinics. Marc graduated from the Royal College of Surgeons, England in 2007 with a Diploma in Clinical Dental Technology and was a founding advisory board member of British Association of Clinical Dental Technology and remains an active member today. Marc’s professionalism, patient care and expertise were recognised at the annual Dental Awards 2009 and 2010 where he was awarded Clinical Dental Technician of the year for two consecutive years. He practices as a CDT at Changing Faces Denture Clinic, Birmingham, where working with Dental Practices that share his vision, he offers the highest standards of care possible as part of a multi disciplinary team. Marc is a regular delegate at international conferences and has a particular interest in the role of dental implants to assist denture stabilisation.