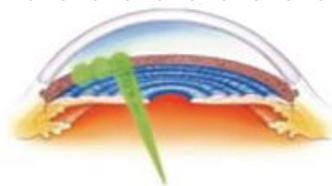




In this issue:

- 2** Launching **Biomedics Toric - Egypt**
- 3** **SEIKO - Synergy X**
- 4** **STAAR - ICL/TICL**
- 5** **EOS Congress**
- 6** **ASTRA Pre-Launching UAE**
- 7** **New Vitalos Cement - Dental**
- 8** **Dr. Paul Rose in the Middle East**
- 9** **Ophthalmic Articles**
- 10** **ELLEX - Ramadan Special**



- 11** **ELLEX - SLT Glaucoma Treatment**
- 12** **Staff Events**

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Medicals Egypt; Big Dream with Little Resources



When you discuss Egypt, millions of thoughts come to mind. 7000 years of history, close to 80 million population, the Pyramids, the Pharos, the Nile, etc. **For me, it is a celebration of our 10 years of history as a company over there.** Egypt 1999 was a dream inspired by the many landmarks and slogans I listed before, a drive to do it by many people close to me, having in front of our eyes over 5000 ophthalmologists practicing and millions of potential patients to cater for. So with a small calculation to the odds and evens of our venture we decided to jump in the plane and start an office in our beloved Egypt.

In fact a photo in Cairo meeting room for Boudy El Zein, Salah Malek and myself, that I will scan and reprint in this newsletter, depicts very much the moment. With Egypt map next to us, we started drawing some calculations, how many IOLs to sell and how many Contact Lenses will generate how much profit; it all looked very easy and quite doable. However with 7000 years of history, experienced consultants knew better and the common statement communicated to us before we landed in Cairo International was: "Are you crazy, Egypt for fun yes but never for business".

Today, I look back and say thanks to the close team mates who believed in my dream and were as adventurers as myself

for making this huge step in our career possible. Egypt for the ones interested does not add up to make a profitable business as one consultant told me; "if you pay 40% import customs and 40% income tax, how can you make profit?". That statement kept me awake so many nights just thinking whether we are doing the right thing. For us, at that time, two themes highlighted our moves at every sun rise; the number of potential customers and the very fact that if you want to make it regionally in the Arab World not being in Egypt just makes the whole equation impossible.

For the curious readers among you, today Medicals Egypt owns its own head office with a team of over 30 people set to grow the business at a 20 to 30% growth rate for the coming 5 years at least. Today, we have a strong market share and we are among the top 3 players in the country. Medicals Egypt bumpy business rides became part of our routine business practices and we live with the anticipation factor to handle strongly and comfortably the next high or low tides of existing in Egypt.

Forward I see Medicals Egypt becoming a corporate model of proper business practice, an advanced provider in our industry with 100s of impeccably equipped staff driving the existing business culture out and entering from the wide door of a new era of "Business with Ethics" attitude.

Congratulations to all of us in Medicals Egypt. Way to go guys!

Your colleague, partner and friend,

Walid G. Barake
President and Founder



Biomedics Toric Launching in Egypt

After four years since first introduced by **Medicals International**, the **Biomedics Toric** is finally in Egypt, covering the largest stock between all our offices. Launching Biomedics Toric, was a true personal challenge and the feedback of the clients was very positive.

The Launching event was memorable, introduced by **Dr. Jonathan Walker**, CooperVision Consultant & a BCLA Scientific Program Officer in England, who for the first time in Egypt, explained thoroughly his studies about global market penetration & the Drop-Out rates in Contact Lenses business, introducing afterwards the main characteristics that make **BIOMEDICS TORIC the number one disposable toric lens in its category.**

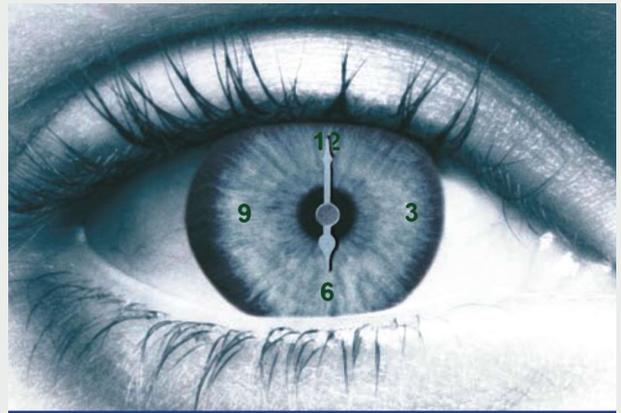
The event took place on Friday 16th of January, at the Intercontinental Hotel-City Stars-Cairo, where a large number of intellectual interested doctors attended from all over Egypt.

The presentation was followed by a pleasant dinner, where doctors shared their queries with **Dr. Walker**, who was very pleased to be of service.

At the end, they all agreed on the necessity of working with the new **Biomedics Toric** for its very promising patient outcome.

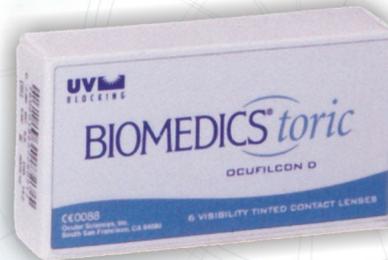


*Nicolas Aramouni,
Sales Manager, CL
Cairo Office*



You're
Looking at
A Revolution

BIOMEDICS® *toric*



Stability and
Comfort

Ocular Sciences

— SYNERGY X: The New Generation of SEIKO Inner Progressive Lenses

As SEIKO continues to be the leader in the ophthalmic lens industry, and from their vision to provide the world with the highest quality lenses and the optimum patient comfort, SEIKO is now offering the new generation of its inner surface progressive modality: **SYNERGY X**.

A SEIKO inner surface progressive lens has all the powers (including spheres, cylinders, addition and prism) surfaced on the back of the lens. These lenses have also a spherical front surface that contains no powers at all. This will help ensure that the patient will benefit from an increased visual field compared to conventional progressive lenses and a decreased distortion throughout the lens surface. In addition to that, the same design philosophies that SEIKO utilizes in their progressive lenses are used in SEIKO SYNERGY X lenses.

. **Multi-Division Aspheric (MDA) :**

This is achieved by dividing the lens into thousands of symmetrical sections, and with the assisted computer simulation light tracing system that is performed in the as-worn position (back vertex distance of 9-12mm and a pantoscopic tilt of 7-10 degrees), the surface curves are re-calculated to assure that there are smooth transitions between each segment (Fig.1). This results in a wider visual field and a reduction in primary aberration throughout the lens.

. **Progressive Prism Variation (PPV) :**

The patented design for SEIKO controls unwanted astigmatism throughout the lens. This helps reducing image jump and results in an improved visual comfort.

. **Linear Progression of Power (LPP) :**

Utilizing this specific property, our progressive lenses have an exact relationship between how far down the corridor the wearer looks and the percentage of the full reading addition that is experienced i.e. half way down the corridor the lens strength is 50% of the full reading addition. This works with the Progressive Prism Variation to allow the eye to see in a more natural way and results in stabilizing the power throughout the reading area.

. **Vertical Prism Control (VPC) :**

The VPC technology controls distortion by minimizing the actual difference in prism value from the central area of the lens to the edge, and manages this change smoothly right out to the periphery of the lens (Fig.2).

The old SYNERGY design incorporates design philosophies which make them balanced and soft. With a softer entrance to the progressive area, this maximizes wearer visual comfort and leads to fast adaption and acceptance of design.

These lenses are ideal for first time progressive wearers; however some presbyopic patients have been for many years wearing harder designs. This harder design typically results in a wider region of optimum reading power but this is compromised by increased peripheral distortion.

SEIKO is concerned with those patients that may not tolerate the soft lens design with a slightly narrower reading area. Now SEIKO has addressed this concern by introducing its new design - **SYNERGY X**.

The advanced new design provides presbyopic patients with a wider field of view (Fig.3). In this design, the distance zone is increased by 18% and there is 16% increase in the near zone compared to the SYNERGY design. With that, SEIKO SYNERGY X lenses are ideal for people who are used to wearing slightly harder progressive designs or who need a wider reading area for close work (Fig.4).

Now your patients will benefit from the highest coating quality provided by SEIKO and the optimum design of progressive lenses with an increased visual field, minimal distortion, easy adaption and improved visual comfort.

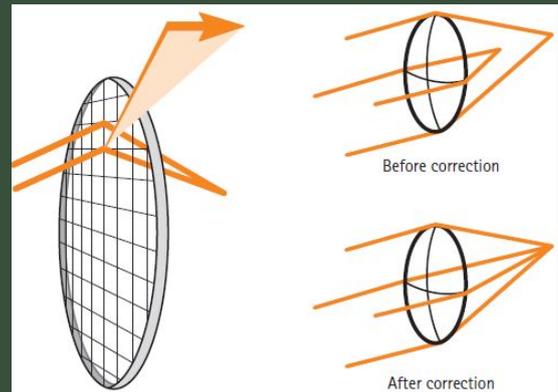


Figure 1

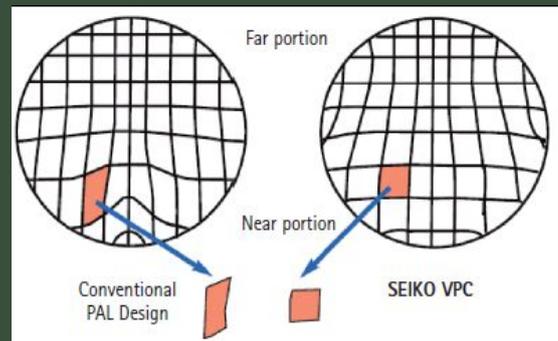


Figure 2

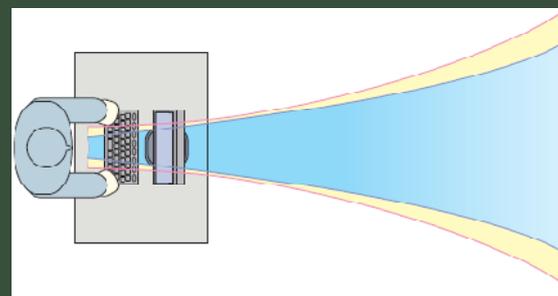


Figure 3: Comparison between a soft balanced lens & a harder lens design with a wider field of view.
Soft Design - Blue: SEIKO SYNERGY
Harder Design - Yellow: SEIKO SYNERGY X

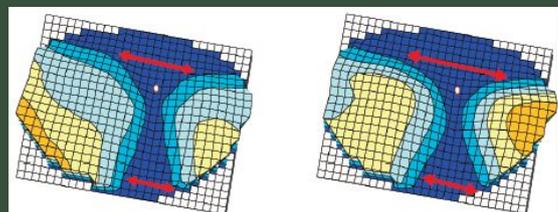


Figure 4: Up to 18% wider far portion & up to 16% wider near portion (14 mm corridor, ADD 2.0 D)
Left: SEIKO SYNERGY
Right: SEIKO SYNERGY X



Sinan Gharaibeh,
Jr. Territory Manager,
Optical,
Jordan Office

How to Optimize your ICL/TICL Outcome - Part I - Preoperatively

Dear ICL practitioners,

After more than 12 years of follow up and technical/clinical experience with the STAAR Visian ICL (Implantable Collamer Lens), and after the implantation of more than 175,000 lenses worldwide, we have the pleasure to share with you a few important points to be considered in order to optimize and improve your ICL surgical outcome. As most of you know, the success of the ICL/Toric ICL (TICL) procedure depends on: proper patient selection, accurate patient data measurement, good surgery, and proper integration in the daily practice. We will start this time with a few topics in the pre-operative measures which refer to the first two points above:

1. Patient selection: ICL patients should be from 21-50 years of age, and have healthy eyes (no glaucoma, lens, retinal, or other ocular health issues or pathologies...), with good ocular history. Hence, the doctor should do a complete eye check-up with a dilated fundus exam, and proper gonioscopy. Remember, the more data we have about the eye, the better knowledge we get about its health and the least problems. ICL patients should also have a stable refraction for at least 12 months since it is not convenient to exchange the ICL now and then with another one with different power. BSCVA should be better than 20/100 in order for the patient to realize the improvement in his vision. Also ICL patients should have an ACD > 2.8 mm with a wide angle. (Fig.1).

2. Anterior Chamber Depth (ACD) measurement: The ACD measurement for ICL/TICL should be taken from the endothelium and not from the epithelium, regardless of the method of measurement. Hence, if the ACD value is taken with the IOL-Master or using the A-Scan, we should deduct the corneal thickness (CT) - or central pachymetry - before feeding the ACD value into the software. This will prevent erroneous over-sizing of the ICL diameter. (Fig.2). For example, if the ACD value from the A-Scan is 3.75 mm, we should deduct from it the CT which will lead to a value of 3.25 mm if CT is 500 μ . This will give a drastic change in the calculated lens size and slight change in power (try it on the software by keeping everything the same and varying the ACD value). We can realize that a high ACD will give an oversized lens (i.e. ICM130 instead of ICM125 if the WTW value is 12.0 mm), and hence it leads to a high vault and its related complications... This can be prevented if we pay attention to the values prior to ordering the lens.

3. White-To-White (WTW) Measurement: The WTW is a very important parameter in ICL/TICL size calculation since it has direct relation with the overall diameter of the lens. The WTW should be measured by the caliper (manually) under magnification (ideally using a microscope in supine position), and then verified with a surgical ruler (for more accuracy). This measurement must be taken horizontally and it is recommended to verify it with a second electronic reading (Orbscan) before feeding it into the ICL/TICL calculation software. Usually, the overall diameter of the ICL/TICL should not be more than 0.5 mm larger than WTW. (Fig.3). For example, if we have a WTW of 12.0 mm, the lens will be an ICM125 or a TICM125. If we have a WTW of 12.0 mm, and the lens turned out to be a 130 lens (1 mm difference), then there is something wrong; we should immediately hold the order and re-check the ACD value if it is larger than normal and re-verify both ACD and WTW.

4. TICL ordering, alternatives & Implantation Guidelines: Spherical ICL ordering is so easy since nearly 99% of the lenses are available in the stock in STAAR Surgical's manufacturing facilities in Nidau. There are four different lens sizes of every power (e.g. if the lens power is -21D, we have ICM115 -21.0, ICM120 -21.0, ICM125 -21.0, ICM130 -21.0). All of them are available in our inventory and also many users have their own on-the-shelf inventory. On the other hand, due to the many parameters in TICL (4 lens sizes, 11 cylinder powers, 41 sphere powers, and 180 axes), thousands of TICL combinations exist and hence it is impossible to have them all

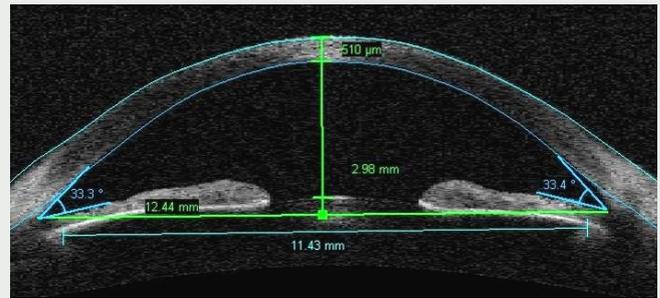


Figure 1

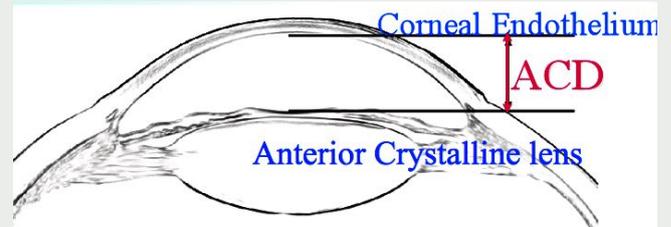


Figure 2



Figure 3

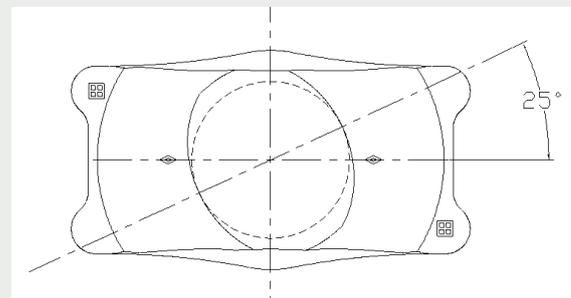


Figure 4

available in stock. We know that end-users prefer to have the exact axis to come on the TICL, which is almost impossible and very impractical to achieve, and it usually takes STAAR Surgical about 6-8 weeks to manufacture every lens. The TICL is custom-made, and the cylinder axis is embedded in it, so it will be implanted horizontally whatever this axis is. Therefore, if every TICL has to be manufactured exactly as ordered, this will result in a big delay and inconvenience for patient and doctor, bearing in mind that the exact axis could not be 100% achieved during the manufacturing process. Hence, in order to reduce delivery time, we routinely deliver TICLs from stock if the axis matches up to $\pm 22^\circ$ from the originally ordered one (with same lens size, spherical and cylindrical powers), and we ask the end-users to use the same TICL calculation software to generate the "rotation diagram" which will guide the surgeon to implant the lens at an axis of $\pm 22^\circ$ from the horizontal. (Fig.4).

Below are the general guidelines for proper TICL implantation:

- The TICL has to be oriented once placed in the eye in order for the cylinder manufactured on the lens to be aligned with the refractive cylinder of the eye. For this purpose the surgeon should mark the horizontal axis while the patients sits or stands in order to prevent cyclotorsion once the patient is on the operation table.

- The TICL which gets manufactured or comes from stock has to be aligned in the eye to match the axis of the rotation diagram, which is $\pm 22^\circ$ from the horizontal marking (unlike Toric IOLs where it has to match the axis of the astigmatism).

- Even if a delivered TICL doesn't need any rotation from the horizontal axis (same axis as the ordered one, or rotation diagram gave zero value), it has to be perfectly aligned with corneal markings and does not guarantee a better outcome nor an easier surgery than the one which rotation axis is not zero.

- Very often beginner TICL users believe that if the axis of the delivered lens is off 15° from that of the ordered lens, the cylinder correction will be off 15° as well, which is a misinterpretation!

- There are no clinical evidence that a lens placed 15° or 20° off from the horizontal axis may be less stable or whatsoever.

- Sometimes, if there is no alternative with the exact powers of the lens ordered, we might propose TICLs with 0.5D less spherical or cylindrical power (which represents only 0.3D once implanted in the eye), and we ask for the end-user's confirmation before shipping this "near" alternative.

Every TICL surgeon around the world is working routinely with alternatives like that, and it is so convenient for everybody. In this way, an alternative lens should reach the end-user within only a few days from ordering it (in about 3/4th of the cases), with an axis of $\pm 22^\circ$ from the axis of the initial lens. In the remaining 1/4th of the cases, we should wait 6-8 weeks for manufacturing a TICL with no close alternatives.

5. Important general points to remember:

a) Minimum acceptable ACD is 2.8 mm (optimal range is 3.0-3.5 mm).

b) Maximum acceptable WTW is 12.5 mm (normal range is 11.0-12.5 mm).

c) There are only four ICL/TICL sizes in terms of overall diameter: 115 (Small), 120 (Medium), 125 (Large), 130 (X-Large) and usually the 120 and the 125 are the most commonly used (80% of the cases worldwide) so when we encounter a 115 or a 130 lens, we should be cautious and verify all data again before placing the order.

d) Monitor the ACD and WTW values in bilateral patients; they should be almost the same or within 0.2 mm. If they differ by more than 0.3 mm we should re-examine the patient again and probably redo the measurements.

e) TICLs come up to +6D of cylinder only !!! (although the software might give us more since it is only a calculator). Hence, when we see a TICM125V4 -14.50/+7.5/80, we should adjust the refraction (decrease the cylinder and add it to the sphere) to have a correct value O +6D.

f) Alternative TICLs are implanted routinely with rotation of $\pm 22^\circ$ maximum, clockwise or counter-clockwise, and they give same outcome as the ordered lenses. Also, alternative lenses with sphere or cylinder power of 0.5D less than the ordered lens, work very well, mainly on high power patients.

Youssef M. ALWAN, B.Sc., B.E.

*Application & Marketing Services Manager, STAAR
Middle East, GCC, & Africa.
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A Different Look of MI in the EOS 2009

One of the world oldest ophthalmic societies, the Egyptian Ophthalmic Society (EOS), held its annual congress in charming Cairo in March of this year.

The largest domestic ophthalmic meeting in the Middle East involved the attendance of more than 2000 registered doctors from Egypt and the countries around, in addition to several speakers from Europe and the States.

The society committee members with the leadership of **Dr. Tharwat Mokbel** have spent huge efforts in organizing the meeting with a rich scientific program addressing the different eye subspecialties topics with a condensed dose of papers, videos, presentations and scientific symposiums.

Medicals International has done its best to match this huge event with extensive presence. In a $\sim 30\text{m}^2$ booth, *Medicals international* has recruited a special designer to create a distinguished look that reflects MI's spirit.

The **Medical & Diagnostic** devices team has demonstrated different machines like the Phaco and Vitrectomy from Oertli (Switzerland) and the ophthalmic YAG, Green, and SLT from Ellex and other devices...With the first presence of Tomey Diagnostic line with MI, attendees were astonished with the elegance and versatility of the devices, also with MI Tomey specialist team who was able to answer doctors concerns and add more value to their well understanding of the products. The ICL and the INTACS, which are considered as one hot topic in the refractive and keratoconus solutions, were a strong attracting point at the booth, where the **Elective & Refractive** team was there to answer questions and to arrange for further proctoring after the meeting.

Contact lens team also showed a different style of work than our competitors. The team was able to convey a precious message to their customers for better and safer CL business practice based on scientific and business information.



Medicals International did not forget to offer its usual hospitality drinks and its symbolic gifts to its customer to keep this memorial always in mind, till we meet in the coming year.



*Ahmad Tabaga,
Sales Manager,
Ophthalmology,
Cairo Office*

Pre-Launching of Astra Tech Dental in the United Arab Emirates

The Astra Pre-Launching meeting in the UAE was held at Al Diyafah Hall 3 & 4 at Crowne Plaza Hotel, in Dubai, on the 13th and 14th of June, 2009.

During those two days, four internationally renowned speakers presented their latest clinical and experimental researches. **Prof. Stig Hansson** from Sweden (one of the engineers and developers of Astra Tech implant system) talked about the interaction between biology and mechanics. **Dr. John Sorensen** from the United States of America tackled the surgical aspect of our system along with the esthetic considerations in implantology. **Dr. Tarek Bourzek** and **Dr. Hadi Al Saffar** from Kuwait also presented their clinical experience with Astra implants in many different situations (single tooth restorations, multiple teeth restorations, ridge augmentation and immediate implantation).

Twenty Five dentists from all The United Arab Emirates had the opportunity to participate in this event and had a very positive feedback about the theme of this meeting: "Immediate Concept" in implantology in a demanding and fast moving environment. The seminar focused as well on developing implant esthetics utilizing Immediate Concepts, Minimal Invasive Protocols, Tissue Management, Restorative Techniques, Design and Material Selection.

Dr. Sorensen also presented in the second day the laboratory procedures in the presence of lab technicians from the UAE.

At the end, I would like to thank everyone involved in the success of this event, and the people who believed in me especially our valuable customers in UAE. We are still in the beginning, and lots of development are still to come.



*Charbel Chaaya,
Junior Territory Manager
Dental Department,
UAE Office*

New Product Line in the Dental Division

Medicals International is proud to introduce a new product line to its Dental Division. It's a Dental Sutures' line from **Angiotech**, manufacturer of **LOOK™** and **SharpPoint™** sutures, providing the dental market with a wide range of sutures and micro-sutures for General Practitioners, Oral Surgeons and Periodontists.

Angiotech Pharmaceuticals, Inc.'s head office is located in Vancouver, British Columbia, Canada with many offices spread accross the United States of America.

Known for its strong R&D capabilities, and as of December 2007, the company's portfolio of intellectual property - developed, licensed or acquired - includes over 250 issued U.S. patents and 230 pending U.S. patent applications.

We are honored to be collaborating with Angiotech and we look forward to a prosperous introduction of our sutures.



*Bassam Khoury,
Business Development Manager,
Dental Division*

A Major Innovation in Bone Tissue Regeneration

PD VitalOs Cement



Manufactured by **Produits Dentaires SA, VitalOs**, the all new bone tissue regeneration cement material, is making great success from Switzerland to the Middle East.

Patients will save chair time and money with the new concept of VitalOs, promoting faster one stage surgery.

PD VitalOs Cement is a mineral product conceived to help dentists in reconstructing their patient's bone defect in an innovative and easy way. In this current paper we will present the features of VitalOs and the clinical benefits related to each of those features.

So as we mentioned in the beginning, VitalOs is a mineral product.

1) The first feature is the fact of offering an **"All-Mineral"** product based on Calcium Phosphate (similar to human bone phase). Clinically, a mineral product eliminates any risk of contamination or infection. On the other hand, when the substances in both tubes mix-up, the final product injected will be DCPD or Dicalcium Phosphate Dihydrate also known as Brushite ($\text{CaHPO}_4 \cdot 2\text{H}_2\text{O}$) that resorbs more completely than HA or β -TCP. And it has 45% of interconnected porosity.

2) The second feature is the **"Hardening"** behavior of VitalOs. Within 3 to 4 minutes after the injection, the cement acquires a mechanical strength similar to cancellous bone. What are the clinical benefits of that feature? First, no soft tissue will be able to grow inside VitalOs on the nanostructure level, plus, there will be no need to use a barrier membrane. Thus the doctor and the patient will be able to save more money.

3) The third feature is the **Ready-to-Use Injectable delivery system**. VitalOs comes in a sterile injection. The doctor doesn't have to mix any ingredients. The cement is injected through a dual syringe attached to a mixing tip. The benefits of this feature are: the cement fills completely and easily all kind of defects even in complex cavities. Once injected, it can be shaped to match the desired geometry, thus giving the patient more secure and guaranteed bone formation.

4) The fourth feature is the **Osteoconductivity**. VitalOs provides a scaffold for the formation of new bone. The new bone formation takes place at the interface bone/cement. And as we said above, it is completely resorbable from a period of 3 to 6 month. No remains of cement are found in the zone of newly formed bone. Clinically, doctors can always track very easily the evolution of the resorbtion on X-Ray.

Our teeth are securely placed in the jawbone by their roots. Extracting a tooth or loosing it for any reason will leave a gap in our jawbone. With time, bone at the level of this gap will resorb, the level of bone will diminish and that situation will push the surrounding teeth to drift towards it, which may induce additional tooth loss, but most importantly, will make

any restorative attempts impossible due to the low level of bone. Doctors and patients alike should always plan ahead and use VitalOs as an easy way to keep bone growing in their jaws and to keep their options open to implant therapy in case they decide to replace their missing teeth one day in the future.



Bassam Khoury,
Business Development Manager,
Dental Division

ROSE K Events

Dr. Paul Rose reserved some valuable time for a very successful Middle East tour this spring.

He spoke at various venues in a series of pre-organized events by our local team members from **Lebanon, Egypt, Jordan, to the Gulf States of the United Arab Emirates and Kuwait.**

We had serious attendance and the events were greatly accepted.

Dr. Rose presented, besides his very instructive slides, several nice case studies that helped illustrate on the clinical advantages of the Rose K system.

We can comfortably state that the **Rose K system** is the leading **Keratoconus** lens used in the Middle East.



Beirut - LEBANON



Kuwait - KUWAIT



Cairo - EGYPT



Dubai - UAE



Amman - JORDAN

BCLA 33rd Annual Conference and Exhibition

For the past 32 years, the **British Contact Lens Association (BCLA)** has held its conferences and exhibitions gathering Contact Lens Specialist, Optometrists and Ophthalmologists from the four corners of the globe.

2009 was no different. I had the pleasure to attend the 33rd annual conference and exhibition of the **BCLA**. The program covered important issues in the contact lens industry as Microbial Keratitis and how to treat it, the latest updates and progress of the Silicone Hydrogel lenses. The conference tackled as well patient compliance issues and how to achieve the ultimate comfort for contact lens wearers; in addition to many other subjects in the CL industry.

The conference comprised as well many social events by the main sponsors and an exquisite, joyful Gala Dinner.



Joseph Nashawaty,
Business Manager,
CL Department



Kuwait's 11th International Ophthalmic Conference

Kuwait's 11th International Ophthalmic Conference for orbital and lacrimal diseases was held on the 7th of February 2009 in Sheraton Hotel, Kuwait City. It lasted for 3 days and **Medicals International** was sponsoring this event. Each day consisted of 3 sessions except the last day which only consisted of one.

Dr. Adel Al Blouchy, Faisal Jeragh, Raed Behbehani and Abdullah Al Baghly formed the organizing committee. **Dr. Bassam Hajj and Abdullah Al Kandari** partnered with **Dr. Faisal** to form the scientific committee. As for the speakers, they were mainly visiting ophthalmologists from UK, the United States, Netherlands, Canada and France.

Dr. Abdullah Al Baghly introduced the speakers. Then the first session started with **Dr. Peter Doleman** presenting the first lecture entitled "Standard Evaluation and Management of Thyroid Orbitopathy." "New Developments in the management of Graves' orbitopathy", "Radiotherapy for Graves' orbitopathy" and "Orbital Cellulitis" followed. Consequently, the session ended with a brief twenty minute panel discussion, and a short break during which the doctors passed by our booth.

The day continued with two other sessions and a lunch break in between whereby we had more time to present our products to the doctors. With a huge T.V displaying all our product line: Ellex lasers, Photocoagulators, Photodisruptors, SLT Selective Laser Trabeculoplasty, Tomey Diagnostic line, AMARIS excimer laser from Schwind, LDV FS laser from Ziemer, ICL from STAAR Surgical, INTACS from Addition Technology, the Knives, Ultraplugs, and Sutures from Sharpoint, Microvisc from Bohus Biotech, it was hard to pass by unnoticed. Even one of the foreign

speakers **Dr. Peter Doleman** showed interest in our products. The last two days continued with lectures about orbital implants, vascular malformation of the orbit, orbital imaging, Mucormycosis in Kuwait, current trends in lacrimal outflow surgery, as well as bacterial Pathogen susceptibility in children with presumed NLD obstruction. This is not the first ophthalmic conference in Kuwait in which **Medicals International** has participated in. We have participated in many others among them: Kuwait's 10th International Ophthalmic Pediatric conference, which happened on the 22nd of October 2008. Up till now all went well and hopefully it will progress in the future.



Yara Abboud,
Territory Manager, Refractive,
Kuwait Office



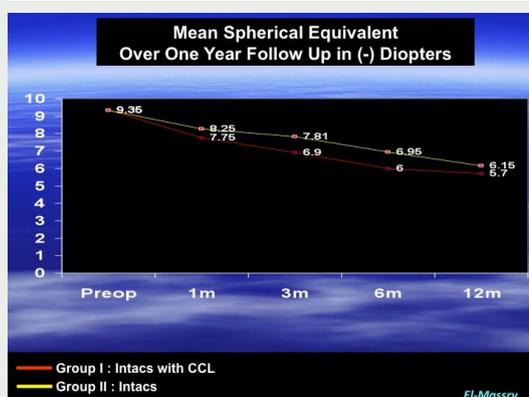
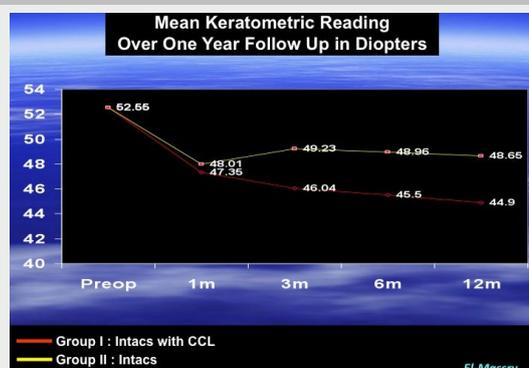
INTACS, Different Strategy for Dealing with Keratoconus

The management of keratoconus patients is a big challenge for a refractive surgeon. The solutions with this disease were always limited to the use of the refractive aids like glasses, toric contact lenses and RGP lenses, where we can not stop the progression of the disease and the deterioration of vision, till we reach a level where the patient is not able to achieve reasonable vision with those refractive aids, and get at the end to a graft transplant which takes a long rehabilitation time. Few years ago, I added another tool to my options in dealing with keratoconus, the **INTACS** (from Addition Technology, USA). **INTACS intracorneal rings** received the FDA approval for Keratoconus in 2001, and through years of studies and development of this technique and its nomogram, it became a very valuable option for keratoconic patients.

In INTACS, two intracorneal segments, 150° each, are placed under 75% of the corneal thickness and on the 8mm optic zone. They work on changing the biomechanics of the cornea, by flattening and converting the irregular surface of the cornea to a regular curvature. The INTACS is not considered as a refractive solution only, but it goes further. With a covering of 300° of the cornea on the 8 mm optic zone, INTACS is acting as a secondary limbus, and this may lead to defer the keratoplasty decision.

In the cases that I have done, I mentioned that the vision of the patients has been improved over time, and with every regular check up visit, I discovered a reduction in the spherical equivalent error of the patients which confirms the tissue addition theory of the INTACS. Also we have started to use the new cross linking technology after INTACS to increase more the strength of the corneal layers, and this has better enhanced the results of the INTACS.

I think that with the INTACS, we are giving the patient more chance to preserve his cornea, and achieve a better vision in a short time without affecting the last option of the keratoplasty surgery, as the INTACS is a real reversible procedure.



Dr. Ahmad El Masry
Professor Doctor of ophthalmology,
Alexandria university

Ramadan & Eyedrops: Perspective of Muslims in the UK

Ramadan is a month of obligatory fasting for adult Muslims during which they can only consume food and beverages after sunset and before dawn. Fasting is not mandatory if it would affect an individual's health or if they were unable to fast due to a health condition. A large proportion of Muslim patients insist on fasting despite this exemption which often leads to poor compliance with prescribed medications with significant health implications.

There have been no studies to assess the views of Muslims living in the UK regarding the use of eye-drops during Ramadan.

METHODS

We conducted a questionnaire survey to assess the views of Muslims in the UK regarding the use of drops during Ramadan and factors that may influence these views (table 1). Authors (NK/SJ) circulated the questionnaire at colleges and mosques in Leicestershire, UK. Three UK Islamic societies circulated the questionnaire among its national members. Participation in the survey was anonymous and voluntary with no monetary incentive.

RESULTS

A total of 125 questionnaires were collected; 24 were excluded due to incomplete data entry. There were 56 female and 45 male respondents: 63 respondents had university degrees, and 38 did not have university education; 45 respondents were born in the UK, and 56 respondents had immigrated to the UK; 64 respondents fast for all days of Ramadan, and 37 fast for only part of Ramadan; 66 respondents would fast for additional days after Ramadan if the fast was broken for any reason; 45.5% believe drops during fasting hours would break the fast; 59.4% would continue their regular treatment if it involved the use of drops during fasting hours; 28.7% would use drops during the fasting hours for a non-painful eye condition whereas 80.2% would for a painful eye condition; 38.6% would use drops during the fasting hours for an eye condition where sight was not affected, whereas 86.1% would for an eye condition if sight were affected.

There was no significant difference between the views of males and females and the views of those fasting all days of Ramadan compared with those fasting only part of the month.

There was no significant difference between respondents with or without a university education for all questions except if vision was affected; 46% with university education would use drops if vision was affected compared with 26.3% without university education. Those respondents who would fast additional days after Ramadan if fast was broken had significantly different views compared with those who would not with significantly higher proportions believing drops break the fast.

There was no significant difference between Muslims born in the UK compared with those who had immigrated except for the question of whether they would use drops during the fasting hours of Ramadan; 57.8% of Muslims born in the UK would use drops compared with 35.7% immigrated Muslims.

COMMENTS

Studies have assessed compliance with treatments for diabetes, asthma, anticoagulation and epilepsy during Ramadan. They showed that during the fasting periods, more than 50% of patients change their drug regimes. To help improve compliance, these specialties have successfully formulated management plans in keeping with the patient's religious practices.

Ophthalmologists have investigated compliance with ocular treatment; however, the impact of religious beliefs has not been assessed. Our results highlight that non-compliance with drops should be anticipated during Ramadan, and it is not possible to predict the views of an individual with regards to the use of drops, based on demographic or educational factors.

It may be possible to improve compliance by educating patients regarding the potential long-term damage that can be caused by non-compliance and formulating management strategies in keeping with the patients' religious beliefs and taboos.

Table 1 Variables studied

1. Age
 2. Sex
 3. Education: university graduate/university graduate
 4. Occupation: employed/professionals/housewife/student/unemployed
 5. No of days the respondents fast during Ramadan: all/not all
 6. Were you born in the UK?
- The following were yes/no responses:
7. Does using drops during the fasting period break the fast?
 8. Would you use eye-drops during the fasting periods?
 9. If drops are used during the fasting periods, should you fast for additional days?
 10. Would you use eye-drops during the fasting periods
- (a) if they were part of your regular treatment for an eye condition?
(b) for a painless eye condition?
(c) for a painful eye condition?
(d) for an eye condition which does not affect your sight?
(e) for an eye condition which affects your sight?

N Kumar,¹ M Dherani,² S Jivan³

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The Impact of SLT on Glaucoma Treatment

"Selective Laser Trabeculoplasty (SLT) has been clinically proven to treat glaucoma by safely and effectively, reducing intraocular pressure in a single, relatively painless procedure, as well as reducing the need for topical glaucoma medications, along with their common systemic side effects." Dr. Ridia Lim

Laser Trabeculoplasty (LTP) has been a recognised treatment for glaucoma for more than 30 years. The landmark study by Wise and Witter established this technique.⁽¹⁾ Although LTP was primarily performed with Argon laser (ALT), lasers of other wavelengths such as Diode, Krypton and continuous wave Nd:YAG laser can also be used to create the same thermal effect. This effect is independent of the wavelength and is related to the energy delivered.⁽²⁾

The uptake of thermal LTP into clinical practice had not been huge despite clinical trials that showed safety, equal efficacy to timolol in intraocular pressure (IOP) lowering, better long-term preservation of optic disc and visual field when compared to using initial eye drops.

The Glaucoma Laser Trial (GLT) showed this with initial treatment of glaucoma.⁽³⁾ The Advanced Glaucoma Intervention Study (AGIS) showed long-term benefit in medically, maximally treated eyes for two years in white people and up to ten years in black people.⁽⁴⁾

Although a safe treatment, there were reports of uveitis, peripheral anterior synechiae (PAS) formation and vision loss. LTP, in large studies, was performed without side effects, however, in the real world there is much more variation in clinical outcome with LTP. Histologically, coagulative damage was seen at the trabecular meshwork with loss of the normal trabecular beams and architecture. In addition, experimental glaucoma in laboratories is produced in primates with the liberal use of thermal LTP. These were the main reasons LTP was left for those patients where maximum medical therapy has failed.

Selective laser trabeculoplasty (SLT) with a frequency-doubled Q-switched Nd:YAG laser has a selective photothermolysis effect;

It lyses the pigmented cells selectively without causing collateral damage to the surrounding trabecular meshwork architecture. In essence, it improves trabecular outflow without scarring the trabeculum. With this appeal, we can use laser with greater confidence that no long-term damage is being done to trabecular outflow. There are many problems with eye drops: local and systemic side effects, non-compliance, non-response, on-going expense and sometimes, a general reduction in quality of life. For many patients there is huge appeal in achieving lower IOP without eye drops or with fewer eye drops.

When SLT was first introduced almost a decade ago, it was used by most practitioners in place of LTP. In other words, it was offered to patients who needed lower IOP when they were on the maximally tolerated medical therapy (MTMT). With increased experience with SLT, particularly the safety profile, many of us are offering it as an alternative to eye drops at all therapy points: initial therapy, as the first adjunctive therapy and in eyes on MTMT failing to reach target IOP (see diagram).

Some studies show that SLT is more effective in treatment-naïve eyes and those eyes with higher IOP (more likely in non-treated eyes). In my experience, many patients still opt for initial medication, although, a smaller, but significant group will opt for initial SLT. This is particularly the busy young professional group. I offer SLT to my patients every time treatment needs to be commenced. That is, with initial therapy and with each adjunctive eye drop; SLT is offered as an alternative.

In most eyes, an IOP reduction similar to latanoprost can be expected from 360 degrees SLT treatment.² A reduction of about 20-30 per cent can be expected in responders to treatment. A responder rate of up to 80 per cent has been reported in previously untreated eyes. A reduction of 20-25 per cent may be achieved in eyes on treatment.

Predicting who will respond to SLT is not easy. Some eyes respond more than others and this does not seem to be related to the amount of trabecular pigment, glaucoma risk factors, the different sub-types of glaucoma or the presence of pseudophakia. Higher pre-treatment IOP is associated with greater response.

The degree of trabecular pigmentation does not seem to influence the outcome but does influence the laser energy needed. The treatment protocol varies between practitioners. Some opt for 180 degrees of treatment; others perform 360 degrees in one or two sessions. Due to the larger spot size (400 μ m), SLT is technically easier to perform than LTP (50 μ m) and takes only a few minutes (see images).

There are very few side effects apart from mild discomfort and a 'pink' eye for a day or two. In the past, anti-inflammatory agents were used post-laser but many, including myself, do not routinely use a post-procedure anti-inflammatory eye drop. Serious side effects have not been reported apart from one case of hyphaema. Apraclonidine or brimonidine are used before and after laser to prevent an IOP rise. All pre-laser eye drops are continued; if the IOP response is very good, a trial of stopping some eye drop therapy can be considered.

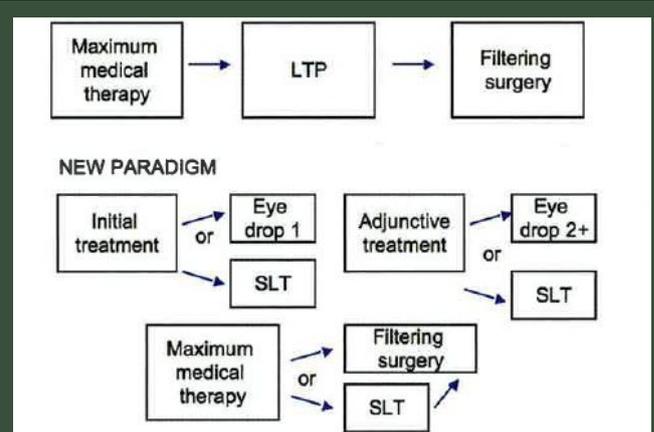
We do not know if the same contraindications should be applied to SLT as LTP. LTP is contraindicated in angle closure, angle recession, uveitic glaucoma, aphakic glaucoma, congenital glaucoma and complex glaucomas such as silicone oil glaucoma. Further studies are needed to answer this question. SLT can be used in post-intravitreal triamcinolone steroid response. SLT can be used safely and effectively in following iridotomy in angle closure eyes when angle not closed by PAS is treated. SLT can be used in eyes that have had previous LTP, with success. In eyes that are heavily pigmented and eyes that have had previous LTP, caution must be exercised as a sustained elevation requiring surgery has been reported.⁽⁵⁾ Clinical experience with SLT re-treatments is increasing and has been shown to be effective.

SLT has given us greater choice in glaucoma and ocular hypertensive treatment, another prong in our armamentarium of IOP management. It has given our patients a safe, relatively painless, one-off treatment that can take the place of eye drops, additional eye drops or defer the need for surgery. While it is not effective in all patients, we should feel comfortable in presenting it as an early option in IOP-lowering therapy.

Dr. Ridia Lim is a cataract and glaucoma specialist in private practice at Hunter Street Eye Specialists, Parramatta, Sydney and a consultant glaucoma surgeon at Sydney Eye Hospital.

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TRADITIONAL TREATMENT



Performing SLT laser using the Latina goniolens



Performing SLT laser using the Latina goniolens

