International Anaplastology Association
2015 Educational Conference
Rio De Janeiro, Brazil

Preliminary Main Conference Program

Thursday, August 27, 2015

8:00 – 8:05	Amanda Y. Behr, MA, CCA, CMI, FAMI	President's Address
8:05 – 8:15	Marcelo Ferraz de Oliveira, DDS	Welcome
	Session Moderator – Suzanne Verma, MAMS, CCA & Marcelo Ferraz de Oliveira, DDS	
8:15 – 8:45	Ricardo Lopes da Cruz	Keynote: Facial Reconstruction – The Identity
8:45 – 9:15	Anders Tjellström, M.D., Ph.D., D.Sc.hc	Keynote: Implant Retained Craniofacial Prostheses: How It All Started
9:15 – 9:45	José Carlos Marques de Faria	Free Flaps for Head and Neck Reconstruction: Personal Experience of 1500 Cases
9:45 – 10:00	Julie Jordan Brown	A Case Study--The Challenges of Switching Between Microtia Treatment Options
10:00 – 10:15	Anne-Marie Riedinger	Nasal Prostheses
10:15 – 10:35	Coffee Break	
10:35 – 10:50	Kerstin Bergström	Complex midface prostheses
10:50 – 11:05	Marcelo Ferraz de Oliveira	Collaboration between Medicine Dentistry and Anaplastology
11:05 – 11:50	Hubert Vermeersch, MD, Ph.D., Ir. Maarten Zandbergen & Jan De Cubber, CDT	Keynote: Complex Facial Reconstruction by Vascularized Composite Allo-transplantation: Synergy Between Surgeon, Anaplastologist and Clinical Engineer
11:50 – 12:20	Marcelo Ferraz de Oliveira and all presenters from morning session	Panel Discussion
12:30 – 14:30	Lunch	
13:30 – 14:30	IAA Board Meeting	
	Session Moderator – Paula Sauerborn, MA, CCA	
14:30 – 14:45	Suzanne Verma, MAMS, CCA	Preoperative Planning and Surgical Placement of Craniofacial Implants using Navigational Systems
14:45 – 15:15	Marcos Curi	Retrospective Study of Pterygoid Implants in the Atrophic Posterior Maxilla: Implant and Prosthesis Survival Rates Up to Three Years
15:15 – 15:30	Joacim Stalfors	Factors of Importance for Implant Survival and Less Skin Inflammation
15:30 – 15:45	Luciano Dib	Extraoral Implants for Orbit Rehabilitation: A Comparison between One-stage and Two-stage Surgeries
15:45 – 16:00	Peter Llewelyn Evans, MIMPT	Integrating Digital Technology into Facial Prosthetics
16:00 – 16:20	Coffee Break	
16:20 – 16:35	Yvonne Motzkus	Prosthetic provision for patients with atypical defects
16:35 – 17:00	Rosemary Seelaus	Will we ever see the end of face prosthetics in our lifetime? Will there be a better solution for our patients?
17:00 – 17:30	Barbro Brånemark, Anders Tjellström, M.D., Ph.D., D.Sc.hc & Marcelo Ferraz de Oliveira, DDS	Tribute to P-I Brånemark
17:00 – 18:00	Multiple Presenters	Poster Presentation

International Anaplastology Association
2015 Educational Conference
Rio De Janeiro, Brazil

Friday, August 28, 2015

8:30 – 9:00	IAA Member Business Meeting	
9:00 – 9:15	Announcements	
	Session Moderator – Juan Garcia, MA, CCA	
9:15 – 9:30	Marcelo Ferraz de Oliveira	Collaboration between Medicine Dentistry and Anaplastology
9:30 – 9:45	Paul Tanner	Prosthetics for Microtia
9:45 – 10:00	Paula Sauerborn, MA, CCA, Kerstin Bergström, Marcelo Ferraz de Oliveira, DDS	Hand and Finger Prostheses – Suction and Implant Retained
10:00 – 10:25	Jan de Cubber, CDT	The Upper Arm Fairing Prosthesis, "The Other Prosthesis" - The Link between Anaplastology and Orthopedics
10:25 – 10:40	Jiri Rosicky, ME, Ph.D., CPO	Limb Prostheses in Anaplastology
10:40 – 11:00	Coffee Break	
11:00 – 11:30	Annie Laverdière	Hybrid Custom Made Breast Prosthesis Method, Virtual Phase
11:30 – 12:00	Rosemary Seelaus	Efficiency with Technology Talk
12:00 – 14:00	Lunch	
	Session Moderator – Yvonne Motzkus	
14:00 – 14:30	Hugo Nary Filho, DDS	15 Years Experience in Zygoma Implants: Critical Analysis Fore Use in Implant-Supported Prostheses
14:30 – 14:45	Amanda Y. Behr, MA, CCA, CMI, FAMI	Practical Application of 3D Technology for a Nasal Prosthesis
14:45 – 15:00	Juan Garcia, MA, CCA	Anatomy of the Eye as Applied to Ocular Prosthetics
15:00 – 15:15	Dawn Forshaw	Medical Tattooing
15:15 – 15:35	Coffee Break	
15:35 – 15:50	Rodrigo Salazar Gamarra	Obtaining 3D Models for Maxillofacial Rehabilitation from a Mobile Device: PHOTOGRAMMETRY
15:50 – 16:10	cPaul Tanner	Mistakes and Remakes
16:10 – 16:30	Jorge Huamani	Tissue Engineering: The Use of a Combination of Cells, Engineering and Materials Methods, and Suitable Biochemical and Physicochemical Factors to Improve or Replace Biological Functions
16:30 – 16:45	Artavazd Kharazian	Penile Prostheses
16:30 – 17:00	Paula Rojas	A Temporary Nasal Prosthesis for a Patient with Recurrent SCC
	Closing Remarks	
19:30 – 22:30	Awards Banquet	

International Anaplastology Association
2015 Educational Conference
Rio De Janeiro, Brazil

Pre-conference Course
Wednesday, August 26, 2015 - 8:00 – 18:00

Advanced Colouring Course – Hands On

Speakers
Peter Evans and Mark Waters

An intensive full hands on one day course using recent advances in colouring technology to produce facial prostheses. During the day participants will produce and auricular prostheses using advanced colouring techniques'

Course Schedule

8:00 - 9:00	Colour Theory Lecture
9:00 – 9:45	Colour Theory Demonstration
9:45 – 10:00	**Coffee Break**
10:00 – 10:30	Spectromatch Reality Series Demonstration
10:30 – 12:00	Hands on session - Participants work in pairs to colour silicone and pack ear mould using Reality Series
12:00 -14:00	**Lunch on your own**
14:00 - 14:45	Spectromatch Eskin Lecture
14:45 – 15:15	Spectromatch Eskin Demonstration
15:15 – 15:30	**Coffee Break**
15:30 – 17:30	Hands on session - Participants work in pairs to colour silicone and pack ear mould using Eskin System
17:30 – 18:00	Q & A Session

Close

International Anaplastology Association
2015 Educational Conference
Rio De Janeiro, Brazil

PC-2

Osseointegrated Implants in Craniofacial and Hearing Rehabilitation

August 29, 2015 - 9:00 – 17:00

Speakers

Dr. Anders Tjellström, Kerstin Bergström, Dr. Arthur Castilho

The aim of this course is to give an opportunity to learn the surgical technique with hands on with osseointegrated implants for the BAHA System for hearing impairment and rehabilitation with facial prostheses

The course will address the following topics:

- Historical background
- Introduction to Osseointegration
- Hearing through bone conduction – BAHA System
- Osseointegrated implants for craniofacial prostheses
- Surgical techniques for BAHA and facial prostheses
- Hands on surgical training

Program

9:00 – 9:15	Introduction
9:15 – 9:50	Historical background
9:50 – 10:00	Discussion
10:00 – 10:10	News from our sponsors
10:10 – 10:45	Hearing through bone conduction
10:45 – 10:55	Discussion
10:55 – 11:10	Coffee break
11:10 – 11:45	Facial Prostheses
11:45 – 12:00	Discussion
12:00 – 13:30	Lunch on own
13:30 – 14:00	Surgical technique for facial prostheses
14:00 – 14:30	Points and pitfalls in Anaplastology
1430 – 15:00	Surgical technique for BAHA
15:00 – 15:10	News from our sponsors
15:10 – 15:30	Implants in Children
15:30 – 17:00	Hands on training
17:00	Closing remarks

International Anaplastology Association
2015 Educational Conference
Rio De Janeiro, Brazil

PC-3

Craniofacial Reconstruction through Plastic Surgery

August 29, 2015, 8:30 – 12:30

Speakers
Dr. Ricardo Lopes da Cruz, Dr. Dov Goldenberg, Dr. Terence Farias, Dr. Tomaz Nassif, Dr. Marcelo Ferraz de Oliveira

The aim of this course is to give an in depth understanding on Craniofacial Reconstruction through Plastic Surgery

The course will address the following topics:

- Facial Identity
- Oncologic Surgery on the face
- Prototyping
- Microsurgery
- Facial Transplant

Program

08:30	Welcome - Dr Marcelo Ferraz de Oliveira, DDS
08:40	Reconstructing the face; the identity - Dr Ricardo Lopes da Cruz, MD
09:10	Oncologic Reconstructive Surgery of the face - Dr Dov Goldenberg, MD
09:40	Prototiping in Facial Reconstruction - Dr Terence Farias, MD
10:10	Coffee Break
10:40	Microsurgery on the face - Dr Tomaz Nassif (RJ
11:00	History of Facial Transplant - Dr Ricardo Lopes da Cruz (RJ)
11:30	Facial Prosthesis – An alternative to major surgery - Dr. Marcelo Ferraz de Oliveira
12:00	Questions and general discussion

International Anaplastology Association
2015 Educational Conference
Rio De Janeiro, Brazil

PC-4

Complex Facial Reconstruction by Vascularized Composite Allo-transplantation: Synergy Between Surgeon, Anaplastologist and Clinical Engineer

August 29, 2015, 14:00 – 17:00

Speakers
Hubert Vermeersch, Jan De Cubber, Maarten Zandbergen

The aim of this course is to give an in depth understanding of composite tissue allotransplantation performed at the Ghent University Hospitals, approached from 3 different angles, creating a unique and comprehensive overview of this highly complex surgery: the story of the surgeon, the anaplastologist and the clinical engineer

The course will address the following topics:

- Facial Transplant
- The role of the Anaplastologist in this procedure
- Pre-operative 3D virtual surgical planning
- 3D printed surgical guides and anatomical models

This presentation covers the composite tissue allotransplantation performed at the Ghent University Hospitals, approached from 3 different angles, creating a unique and comprehensive overview of this highly complex surgery: the story of the surgeon, the anaplastologist and the clinical engineer.

The surgeon

Ghent University Hospitals was preparing to create a Center for VCA since mid-2009. At the end of 2010 a major facial trauma was admitted to our hospital. It was obvious from the start that classic flap reconstructive procedures would not be sufficient. However, after temporary reconstruction with a three-dimensionally tapered anterolateral free thigh flap (ALT), the patient and family clearly wanted further reconstruction. Facial transplantation was proposed and accepted. Agreement from Ghent University Hospitals' Ethical Committee and Hospital Management was secured, followed by the patient's informed consent. Multiple team meetings and cadaver dissection exercises were held in 2011, resulting in scripts for the surgical procedure in both the donor and the recipient -with photographic and textual descriptions of every step. Jan De Cubber (Anaplastology) and Materialise (3D virtual planning - preparation of models and surgical templates) were invited to participate in all of these planning sessions. By the end of 2011, when a suitable donor became available, we were fully prepared and the surgical procedure proceeded flawlessly in two adjacent operating rooms . More than 2 years after transplantation, the patient is doing well, continuing to functional rehabilite under the guidance of

prof. K. Van Lierde, member of the team and head of the University Speech and Language Department.

During this presentation, we will give the audience an overview of these steps, without disclosing protected patient information.

The anaplastologist

On December 31st , 2011, the effectuation of the first facial VCA at the University of Ghent, Belgium took place. The intervention was born approximately three years earlier, with the formation of a multi-disciplinary quest looking for answers ~~on~~ to questions that had never been asked before. This presentation is one part of a trilogy that highlights the intense collaboration of the surgical team, the anaplastologist and the clinical engineer guided by cutting edge 3-d technology.

Prof Vermeersch thought that the input from the anaplastologist in the team was crucial from the very start, and all members stated in hindsight that it was an extremely important step. Although the initial intended contribution was limited to the development of a production protocol for the donor's death mask, the anaplastologist's extensive experience with 3D virtual surgical planning and 3D printing of anatomical models largely contributed to the successful outcome.

Two other areas in which the anaplastologist provided invaluable input were the making of a support structure to transport the graft from the donor hospital to the Ghent University Hospital, if necessary, and in the production of an bone-anchored orbital epithesis. As an extensive amount of bone was harvested from the donor, a supporting structure replacing this missing hard tissue was required to support the donor mask. A 3D printed model, produced to match the planned bone graft, proved to be an excellent scaffold for the final donor mask. After the facial transplantation was completed, an implant retained orbital epithesis was manufactured. The orbital implants w~~h~~ere pre-operatively planned virtually in 3D to ensure a more predictable outcome that combines optimal bone quality to ensure implant stability and implant locations to ensure ideal anchors for the epithesis.

In conclusion we learned that applying pre-operative virtual surgical planning in 3D in combination with 3D printed anatomical models and surgical guides resulted in a predictable and high quality outcome and most importantly, a satisfied patient.

The clinical engineer

A clinical engineer enables the surgeon and anaplastologist to apply the principles of pre-operative 3D virtual surgical planning and utilized 3D printed surgical guides and anatomical models for a specific patient. For this highly complex **VCA**, principles and tools that are used routinely in reconstructive and orthognathic surgery, were adapted to support this unique surgery.

To obtain a 3D virtual model of the patient's hard and soft tissues, a CT scan of the patient was imported in the DePuySynthes ProPlan CMF software. This served as a basis visualize the extent of the deformity and start the 3D virtual surgical plan. In close collaboration with the surgical team**,** the Materialise clinical engineer provided a preliminary surgical plan that was finalized during multiple interactive planning sessions.

With an overlaying technique, the ideal size and shape of the hard tissue graft were determined and 3D printed to provide a tactile reference for the surgical team that was extensively used during cadaver trials. In addition to the graft model, an anatomical model of the patient's anatomy prior to transplantation and surgical cutting guides were provided which proved to be ideal communication tools for the donor and recipient surgical teams.

After completion of the surgery, a post-operative CT scan was used to compare the pre-operative surgical plan with the post-operative outcome.

International Anaplastology Association
2015 Educational Conference
Rio De Janeiro, Brazil

Workshops
Saturday, August 29th

- **Demonstration Workshop 1** – Ocular Fitting - 8:00 – 9:00
  Speakers**:** Robert Robinson, Kuldeep Raizada

- **Demonstration Workshop 2** - Demonstration on Finger Epitheses - 9:00 – 10:00
  Speaker: Jan De Cubber, CDT, Anaplastologist

  The demonstration will explain step by step how to make a finger epitheses. By combining a multi-layer silicone technique, with 3-d computer technology a new generation of finger- and hand epitheses will make a difference for our patients. We analyzed all existing production techniques, and tried to isolate the interesting parts of each one of them. That precious information was then confronted with the state of the art of computer aided design and manufacturing, resulting in the new generation of finger – and hand production protocol.

- **Demonstration Workshop 3** - Application of ZBrush for Anaplastology - 10:00 – 12:00
  Speaker: Ales Grygar

  This course is intended for those who want to expend their knowledge business into Virtual Planning using ZBrush software

  Main topics are:
  - Importing patient's 3D data into ZBrush software
  - Digital sculpting of a prosthesis from scratch
  - Modification of existing virtual 3D model of a facial part
  - 3D visualization of a fitted prosthesis
  - Preparing data for 3D pronting
  - Demonstration of 3D printed models

- **Demonstration Workshop 4** - Clinical Evaluation of Patients with Anophthalmia – 12:00 – 13:00
  Speaker: Margarita Rosa Caicedo

  The following topics will be addressed during this presentation: Ethiology, Pathology, Surgical Procedures; Techniques for Insertion and Removal of Prosthesis (video); and, Instructions and Recommendation on How to Use the Prosthesis.

- **<u>Demonstration Workshop 5</u>** - Silicone & Magnetic Retention - 13:00 – 15:00
  Speakers: Mark Waters, John McFall

  - This course will demonstrate the use of a new Magnetic Attachment for auricular prostheses.
  - Demonstrate the use of silicones, and bonding the magnet into the silicone using more than one silicone.
  - Discussion of the various primers and solvents available for a success implant retained prosthesis.

- **<u>Demonstration Workshop 6</u>**– Putting Colour Back Into People's Lives - 15:00 – 17:00
  Speaker: Dawn Forshaw

  This course will be a live tattooing demonstration on a patient. Medical Tattooing can be the answer to many patients by offering 247 solutions, by adding colour to the body anywhere colour is missing, post surgery, injury, defect or trauma.