



SURGICAL AND PROSTHETIC COMPLICATIONS IN IMPLANTOLOGY: CHALLENGES AND RESOLUTIONS

COURSE 4

ITALIAN ACADEMY OF
OSSEOINTEGRATION

Surgical and Prosthetic Complications in Implantology: Challenges and Resolutions

By IAO (Italian Academy of Osseointegration)



SUMMARY



Topic:

Advanced Insights into complications in Implantology and management of peri-implant disease



Objectives:

- Surgical, neurological, and prosthetic complications in implantology
- Planification, evaluation, and implant positioning errors
- Bone, tissue, and integration issues during implant placement
- Management of peri-implant diseases using both surgical and non-surgical approaches
- The relationship between hygienists and surgeons in treating peri-implant diseases
- Prevention and management of complications in GBR, Sinus Lift, and Zygomatic Implantology
- Management of nerve injuries in the oral cavity medicine
- Plan and execute implant treatments using standardized protocols to minimize the risk of complications



WHY TO ENROL:

1- Gain advanced knowledge on managing surgical, neurological, and prosthetic complications in implantology.

2- Learn effective strategies for handling peri-implantitis from diagnosis to maintenance, enhancing patient outcomes.

3- Acquire practical skills and insights on complex procedures like GBR, Sinus Lift, and Zygomatic Implantology, ensuring optimal clinical results.

LEVELS

Difficulty Advanced

Theory ●●●●●

Practice ●●●●●

KEY INFO



English



On Demand



Implant Surgery - Complications



9h



9 video lectures

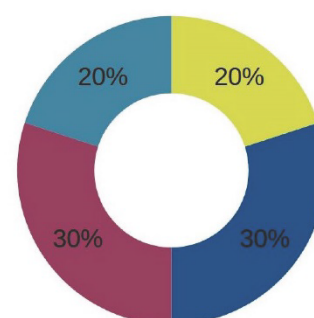


Clinical Yes



NO

SKILLS YOU WILL LEARN



■ Surgical, Prosthetic and Neurological complications in Implantology

■ Perimplantitis Management

■ How to Prevent Complications

■ GBR, Sinus Lift and Zygomatic Implantology Complications



Channel Description:

The Italian Academy of Osseointegration (IAO), the most important implantology society in Italy and internationally recognized, welcomes you to **“Surgical and Prosthetic Complications in Implantology: Challenges and Resolutions”**; the new learning experience designed to provide you with practical skills, insights, and tips & tricks to effectively **manage implantology complications** and **peri-implantitis**.

The course covers a wide range of topics, starting with an in-depth exploration of **surgical complications in implantology**.

Special focus is placed on **neurological** and **prosthetic complications**; participants will discover how to identify, prevent, and efficiently address these challenges, ensuring optimal patient outcomes.

Participants will also gain comprehensive knowledge on managing peri-implantitis with **innovative, effective, and minimally invasive approaches**. A distinctive feature of the course is the comparison of therapeutic strategies from both a **surgeon’s and a dental hygienist’s perspective**, offering a complete understanding of the topic.

Participants will learn to handle peri-implantitis from **diagnosis** to **biofilm removal**, through **non-surgical and surgical therapies**, and culminating in long-term **post-operative hygiene maintenance** strategies.

Moreover, the program tackles the prevention and resolution of complications arising during or after complex procedures such as **Guided Bone Regeneration (GBR)**, **Sinus Lift** surgeries, and **zygomatic** implantology. There will also be time to discuss prevention and treatment of **neurological complications**, including the challenging management of nerve injuries following implant placement.

According to the **“How to do it” principle**, this course emphasizes practical application, offering participants invaluable tips and insights for their daily clinical practice.

Video lectures are enriched with real-life **clinical cases**, providing a deeper understanding and indispensable **practical references** for a highly professionalizing experience. Each session concludes with a **“Battle of Concepts”** where leading experts present contrasting perspectives, fostering deeper engagement and professional growth.

Join IAO experts and discover how to prevent and manage implantology complications stress-free.

In particular, this course focuses on:

- **Surgical, neurological, and prosthetic complications** in implantology
- Planning, evaluation, and **implant positioning errors**
- **Bone, tissue, and integration issues** during implant placement
- Management of peri-implant diseases using both **surgical and non-surgical** approaches
- The relationship between **hygienists and surgeons** in treating peri-implant diseases
- Prevention and management of complications in **GBR, Sinus Lift, and Zygomatic Implantology**
- Management of **nerve injuries** in the oral cavity

At the end of the course, you'll be able to:

- Plan and execute implant treatments using standardized protocols to **minimize the risk of complications**
- Recognize the **early signs of complications** and apply techniques for optimal management
- Minimize the risk of severe **nerve injuries** in the oral cavity during implant placement
- Place prostheses on implants to avoid **mechanical, technical, biological, and aesthetic-functional** complications
- Manage peri-implant disease **from diagnosis to maintenance**, using both surgical and non-surgical approaches
- Gain an in-depth understanding of major and common risks associated with complex procedures like **GBR, sinus lifts, and zygomatic implants**

Who is the course for?

This video course is particularly recommended for **all professionals in the field of implantology** who wish to receive a timely update on the management of the most common **surgical, prosthetic, technical and neurological complications**.

Ok, but how does it work?

This **9 hour** course is divided into **9 video lectures** that you can find by accessing your personal osteocom area from any device and downloading from the osteocom mobile app, available on iOS and Android.



Video Lecture 1 - Surgical complications in implantology (1h 2min) By Dr. Roberto Pistilli

Description:

The first lesson of this course focuses on the **complications** that may arise during or after implant surgery.

Dr. **Roberto Pistilli** illustrates, through a series of clinical cases, errors in the evaluation and management of **soft and hard tissues** around implants, as well as positioning mistakes, providing participants with valuable advice on **how to prevent these issues**.

Furthermore, participants will observe cases of peri-implant diseases that required complex treatments - including the management of the **remaining bone volume** - and complications related to **sinus problems**. They will learn when to adopt an endoscopic approach or direct access to remove a failed sinus implant.

Finally, Dr. Pistilli discusses cases of failure due to the **lack of biomaterial integration** in bone regeneration procedures.

In particular, this lesson covers the following topics:

- Implant **positioning errors**
- Errors in the evaluation and management of **soft and hard tissues**
- **Sinus lift**: anatomy and common problems
- Lack of **biomaterial integration**
- Failure in **regenerative practices**

Video Lecture 2 - Neurological Complications in Implant Surgery (54min) By Prof. Federico Biglioli

Description:

Prof. Federico Biglioli, one of the leading experts in **microsurgical reconstruction**, discusses the topic of oral cavity nerve injuries.

Participants will observe the **evolution of microsurgery** in recent years, which has debunked the myth of the impossibility of reconstructing a severed nerve. **Clinical cases** are presented to delve into severe complications such as loss of sensation, facial paralysis, or the onset of chronic pain caused by **nerve injuries** following implant placement.

Participants will receive comprehensive and professional training on **potential nerve injuries**, both reversible (such as compression and stretching) and irreversible (such as nerve transection), and they will learn effective measures to **minimize the risk** of these complications and how to manage them appropriately and effectively.

In particular, this lesson covers the following topics:

- The culture of **nerve reconstruction** in maxillofacial surgery
- **Nerve injuries** in the oral cavity
- **Perforations** of the incisive, infraorbital, and lingual nerves
- Treatment of **cystic lesions**
- **Post-surgical complications** in zygomatic implantology
- Nerve injuries following **endodontic therapies**

Video Lecture 3 - Prosthetic Complications (57min) By Dr. Gianluca Paniz

Description:

Prosthetic complications in implantology are frequent, especially in complete edentulism reconstructions. This video lesson focuses on issues related to implant-supported prostheses.

Through the analysis of several clinical cases, **Dr. Gianluca Paniz** illustrates the different types of prosthetic complications that may occur: **mechanical** (such as screw loosening, screw fractures, and decementation), **technical** (such as prosthetic fractures), **biological** (such

as peri-implantitis and mucositis), and **aesthetic-functional** (namely problems in the management of soft tissues, chewing, and prosthetic design choices).

In particular, this lesson covers the following topics:

- The definition of **success in implant prosthetics**
- **Screw-retained vs. cemented prostheses:** clinical indications
- The combination of **surgical and prosthetic approaches**
- **Prosthetic complications:** mechanical, technical, biological, and aesthetic-functional

Video Lecture 4 - How to Treat Peri-Implantitis (1h 3min) By Drs. Maria Gabriella Grusovin e Alessandra Sironi
Description:

Drs. Grusovin and Sironi discuss the management of **peri-implant disease**, from diagnosis to maintenance, including both surgical and non-surgical treatments.

Participants will gain a deeper understanding of the close relationship between **periodontists and hygienists** in treatment management, learning how to collaborate effectively. Through a series of **clinical cases**, the speakers examine the risk factors leading to peri-implant disease, categorized as non-modifiable, partially modifiable, and fully modifiable.

Finally, the lectures illustrate how to **decontaminate the implant surface** and manage the post-treatment maintenance phase.

In particular, this lesson covers the following topics:

- The definition of **peri-implant disease**
- **Diagnostic protocol:** tissue inspection, probing, presence of bleeding, and suppuration
- Mechanical, chemical, and laser **biofilm removal**
- **Surgical vs. non-surgical** therapy
- Peri-implant disease management: the **hygienist's perspective**

Video Lecture 5 - Surgical and Non-Surgical Treatment of Peri-Implantitis (1h 7min) By Dr. Roberto Abundo

Description:

This video lesson focuses on the considerations to be made when treating **peri-implant disease surgically**.

Dr. Roberto Abundo provides an in-depth discussion of peri-implant defect types, emphasizing that different **defect morphologies** have varying intrinsic regenerative potential. In this context, participants will learn that **defect containment** is the key factor in bone regeneration potential.

The lecturer also explains how surgical therapy must **modify the implant surface**, the bone defect, or the soft tissues to be effective.

In particular, this lesson covers the following topics:

- **Defect containment** and regenerative potential
- Surgical **biofilm removal**
- Supportive therapy and **post-surgical maintenance**
- Patient motivation and instruction for **hygienic maintenance**
- Long-term **post-operative therapy**

Video Lecture 6 - Complications in GBR (1h 6min) By Prof. Massimo Simion

Description:

Prof. Massimo Simion discusses the prevention and management of **complications** in **Guided Bone Regeneration (GBR)**, distinguishing between **neurological complications** resulting from flap release and vascular complications caused by periosteum release.

Participants will also delve into **post-surgical complications**, such as flap perforations and various types of membrane exposures, ranging from simple to complex cases, up to the most **severe complication**: abscess formation during the healing phase.

In particular, this lesson covers the following topics:

- Classification and treatment of **neurological** and **vascular complications** typical of GBR
- How to perform **flap release** to avoid complications

- How to prevent **early membrane exposure** during GBR
- **Abscess formation** during the healing phase
- Precautions to minimize the **risk of complications**

Video Lecture 7 - Complications in Maxillary Sinus Lift Techniques (1h 7min) By Prof. Claudio Stacchi

Description:

Prof. Claudio Stacchi discusses complications associated with both **lateral and crestal maxillary sinus lift** techniques, focusing on prevention and pre-operative assessment.

Participants will observe how to perform a comprehensive **radiographic examination** of the ostiomeatal complex to evaluate its patency and determine if a sinus lift can be performed. The width of the maxillary sinus is highlighted as an additional key factor in determining the **risk of membrane perforation**. Techniques for repair, such as sutures, collagen membranes, or platelet-derived materials will be demonstrated.

In particular, this lesson covers the following topics:

- **Membrane perforation** and the Maxillary Sinus Elevation Difficulty Score
- **Prevention of complications** and case selection
- What to do in the event of membrane perforation: **repair techniques**
- **Post-operative** complications

Video Lecture 8 - Complications in Zygomatic Implantology (52min) By Dr. Pietro Felice

Description:

Dr. Pietro Felice discusses **post-operative complications** in **zygomatic implant** procedures, a significant challenge with both immediate and long-term effects.

Participants will learn that accurate pre-surgical evaluation - including **3D analysis** using stereolithographic models - is crucial to prevent complications such as **fractures, primary instability, and fibrointegration**, thereby improving long-term outcomes.

In particular, this lesson covers the following topics:

- **Immediate complications:** infraorbital nerve paresthesia, orbital cavity penetration, zygomatic fractures, and lack of primary stability
- **Late complications:** chronic sinusitis, oro-antral fistulas, fibrointegration, and abutment fractures
- **The role of 3D planning:** using stereolithographic models for detailed zygomatic anatomy analysis
- Challenges in achieving **primary stability** and the risk of **biomechanical complications**

Video Lecture 9 - Iatrogenic Nerve Injuries (56min) By Prof. Federico Biglioli

Description:

Nerve injuries in the oral cavity, often caused by endodontic treatments, are a common but solvable issue. The evolution of **nerve microsurgery** has shifted the paradigm, making it possible to successfully intervene and **reconstruct damaged nerves**, reducing permanent sequelae and improving patients' quality of life.

In particular, this lesson covers the following topics:

- **Endodontic therapy** and nerve injuries to the inferior alveolar and lingual nerves
- **Types of nerve injuries:** compression, stretching (reversible), and traumatic neuromas
- **Implant removal** from the canal and microsurgical techniques for nerve function restoration
- **Nerve regeneration** through microsurgery



Scan the code
and enter the
course



Author's Bio:

The Italian Academy of Osseointegration (IAO) is a premier scientific organization for modern dental professionals, offering high-quality cultural and educational programs. IAO advances scientific progress and elevates professional standards in Osseointegrated Implantology, Oral Surgery, and oral cavity rehabilitation, featuring internationally acclaimed experts who provide top-tier insights and knowledge in the field.

