



Saudi Fellowship In Implant Dentistry (SF-ID)



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2017

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INTRODUCTION

The replacement of extracted or missing teeth by endosseous dental implants has received a great deal of attention from the dental profession.

A variety of innovation dental implant designs, surgical and prosthetic techniques have been explored, with the objectives of providing a long term, trouble free, fully functional dentition to the broadest possible spectrum of potential patients. Moreover, the use of dental implants has been showing increased acceptance and practice not only among dental specialists but also uncertified general practitioners. At present, reports from clinical trials showed a success rate of more than 90% over 10 years of function. However, failed dental implant is not unusual with a failure rate of about 10%.

Successful dental implants are based on adequate knowledge and training on the following aspects:

- Proper patient selection,
- Pre-planned surgical phase,
- Atraumatic surgical technique,
- Preplanned prosthetic phase,
- Postoperative care, and
- Maintenance therapy.

To insure the high success rate of treatment with dental implants and to minimize the cases of failure, the practitioners have to have an advanced education and training in this field. A well planned training program in dental implants, which covers in depth all the above mentioned aspects for success in addition to the application of the most updated and evidence-based techniques in implant dentistry, can help in achieving the highest success rate of dental implants and provide the population with the best and most efficient treatment service, and this is the main objective behind the establishment of the **“fellowship program in implant dentistry”**.

Goals and Objectives:

This is a two years program intended to provide formal education and clinical training for graduate dentists in the field of implant dentistry. The course will cover the basic and the advanced aspects of scientific evidence for patient management with dental implants, including a new concept of comprehensive treatment planning based on biological research of the last two decades. **This will be in the form of didactic component, pre-clinical & clinical training, and case presentation & treatment planning.** Group discussion as well as audiovisual sessions will be conducted to help to acquire in depth the implant application knowledge. The clinical training will be under close supervision by experienced staff members to optimize and standardize the surgical and prosthetic techniques.

Upon completion, graduates will be able to set up comprehensive treatment plans and show a competency in performing basic and advanced surgical and prosthetic aspects of dental implant (*see clinical objectives*).

Program Duration:

2 years – starting from March of each year

Admission Requirements:

This program is designed for practitioners who are interested in implant dentistry and have the desire to develop a competence in this field.

Applicants seeking admission into the SF-DI should fulfill, **in addition to the BDS degree or equivalent from a recognized university**, one of the following:

A Saudi Specialty Certificate or equivalent in one of the following specialties:

- Periodontics
- Prosthodontics
- Restorative dentistry
- Oral and Maxillofacial

The fellows accepted will be subjected to the rules and regulation of the Saudi Commission for Health Specialties.

Training Requirements:

The training centers to be accredited for implementing the program have to fulfill the following:

1. Availability of qualified consultants in periodontics, prosthodontics, and oral surgery.
2. Already placing and restoring not less than 200 implants per year.
3. A proper clinical set up for successful implant surgeries.
4. A proper dental lab and qualified dental implant technicians.
5. Availability of at least 2 well recognized implant systems approved by the FDA.

Program Contents

First year (F1)

A. Didactic – (202 hours)

The didactic component will extend throughout the whole program period. In the first year it is comprised of **lectures in basic *specialty topics, classic literature & book review seminars, and resident topic presentation.***

The objective is to educate the fellows thoroughly on implant biomaterials, tissue biology, tissue engineering and radiographic assessment. Great emphasis will be placed on a structured link between the didactic part and the clinical application of dental implant.

I. *Basic Specialty Topic – (80 hours)*

This course is given in the form of lectures in basic specialty topics of implant dentistry once a week (2 contact hours) during the whole period of the program. The teaching will be given by senior staff members in the department and invited speakers. The topics to be covered are:

1. Introduction to the course
2. Compromised bone and patient in implant dentistry
3. Pharmacology in implant dentistry
4. Rationale of dental implants and implant terminology
5. Biomaterials, implant design, and surface topography and geometry of dental implants
6. Implant – soft tissue interface
7. Bone and its cells – modeling and remodeling
8. Patient history, evaluation and record collection for implant treatment
9. Implant site assessment

10. Radiographic assessment in implant dentistry
11. The use of Computerized Tomography for treatment planning
12. Surgical templates and implant guided surgery for multi-dimensional implant positioning
13. Risk factors for optimal osseointegration
14. Periodontal disease and its significance in implant dentistry
15. Treatment planning in implant dentistry
16. Implant versus root canal treatment versus re – RCT versus fixed dental prostheses versus no treatment : Evidence-based decision making
17. One –stage vs. two –stage implant placement techniques
18. Flap designs and surgical protocols in implant dentistry
19. Prosthodontic treatment options in implant dentistry
20. The use of PRF in implant dentistry
21. Occlusion and implant biomechanics
22. Surgical complications
23. The biological aspect of using barrier and graft materials around dental implant (GBR)
24. Bone block grafts in implant dentistry
25. Sinus augmentation for implant dentistry
26. Immediate implant placement
27. Extraction socket augmentation for ridge preservation
28. The socket shield technique for buccal wall preservation during immediate implant placement
29. Implant in the esthetic zone – Pink and White esthetic scores
30. Implant-supported overdenture
31. Impression taking and laboratory procedures
32. Temporization for implant restorations

33. Fixed prosthesis in implant dentistry
34. Immediate loading
35. Castings, indexing/soldering, porcelains and prosthesis design including mechanics of implant components
36. Peri-Implantitis, ailing, failing and failed dental implants
37. Prevention and treatment of prosthodontic complications
38. The scope of orthodontics: before, during and after implant treatment.
39. Dental implants used for anchorage in orthodontic therapy
40. Maintenance of dental implant patients

II. Review Seminars – (120 hours)

- **Literature review seminar (60 hours):**

This seminar is designed to provide the fellows with a well-rounded background in classic literature of dental implant. The seminar will be conducted once per week (3 contact hours) for a period of 20 weeks.

The fellows at the beginning of the program will be provided with a list of key articles from various journals related to dental implant.

When assigned an article, the fellow will be trained to define the purpose of the study, describe the method and materials, categorize the study as descriptive or experimental, and criticizing the study by comparing with previous studies.

- **Book review seminar – (60 hours):**

Referenced textbooks of dental implant will be reviewed during this seminar. This session will be conducted in alternate with the classic literature review seminar (3 contact hours) for a total period of 20 weeks

The objective of this course is to train the fellows on how to be able to extract the information when reading textbooks and participate actively in the discussion with the faculty members.

Recommended Books

- **“Clinical Periodontology and Implant Dentistry”**. Sixth Edition (2015). Editors: *Jan Lindhe and Niklaus P. Lang*. (<http://www.blackwellpublishing.com/Lidhe>)
- **“Contemporary Implant Dentistry”**. Third edition (2008). Edited by: *Carl E. Misch* (<http://www.elsevier.com>)

III. Fellow Topic Presentation – (2 hours)

At the beginning of the fellowship program, each fellow will be given two topics selected by the program director to be prepared throughout his/her two years period. The fellow is expected to make ready his/her presentation with the latest scientific information and be able to give a 45 minutes power point presentation in front of the fellowship faculty. The fellows are requested to present one topic in the first year and the second towards the end of the program.

Example of topics selected for fellows presentations in the first year:

1. Osseointegration: Historic background and current concepts.
2. Dental implants as an optimal form of treatment.
3. Bone growth inducers and implant dentistry: What does the literature tell us?
4. Bone grafting materials and membranes in implant dentistry.
5. Submerged versus non-submerged (one-stage versus two stages) implant placement.
6. Immediate versus delayed implant placement.
7. Splinting versus non-splinting of implants to natural teeth.
8. Is smoking a risk factor for dental implant survival?
9. Medically compromised patients in implant dentistry.
10. Platform – switched dental implants design.

B. Pre-Clinical Course – (30 hours)

At the beginning of the program and in preparation for the fellows to start their clinical training session, they will be subjected to a condensed pre-clinical training course. This activity will take place once a week (3 contact hours) for a period of 10 weeks with the aim of:

- Familiarize the fellows with the different implant systems
- Introduce the surgical techniques of implant placement
- Introduce the prosthetic procedures
- Demonstrate alternative surgical and prosthetic techniques

This pre-clinical training course will involve the following:

I. Hands-on training course – (24 hours)

This training course will involve the following activities:

1. Hands-on training on jaw model – (12 hours)

The hands-on training on jaw model comprises 4 sessions that will mainly concentrate on training the fellows on the most commonly available submerged and non submerged implant systems.

2. Hands-on training on animal model – (3 hours)

This is a 1 session training course on surgical techniques of implant placement on animal models. The fellow is expected to practice on different implant placement techniques on the jaws of sheep as well as the different suturing techniques following.

3. Prosthetic laboratory training – (9 hours)

The fellows will have 3 sessions training on the laboratory procedures for implant prosthesis. The course will include impression handling and construction of implant prosthesis using the different prosthetic components.

II. Audio-visual learning aids – (6 hours)

The fellows will have 2 sessions to review video-tapes showing surgical and prosthetic techniques of implant rehabilitation as recommended by the manufactured companies for each system. The clinical instructors will attend these sessions to elaborate and discuss the differences in other surgical and prosthetic techniques.

- **Clinical Training – (870 hrs / 30 weeks ~ 29 hours / week)**

The fellows will be assigned 8 clinical sessions per week for patient's treatment, which will start after the completion of the pre-clinical courses for a period of 30 weeks. This is to enable them to develop clinical skills in diagnosis, surgical placement and final restoration of dental implant. All patients will be selected by the program director before assigned to the residents.

Evaluation procedures will include assessment of each patient's systemic and oral health before treatment is initiated. The fellows have to be familiar with the dental implant protocol used in the clinic and must apply all the preclinical requirements for implant treatment patients.

Stage 1:

- Chief Complaint
- History:
 1. medical history pertinent to oral health
 2. dental and periodontal history
- Clinical Findings
- Radiographic findings
- Etiologic factors
- Diagnosis
- Treatment alternatives
- Treatment plan
- Prognosis

Stage 2:

- Surgical implant placement
- Suturing technique
- Post-operative care and instructions

Stage 3:

- Implant prosthetic construction

Second year (F2)

A . Didactic – (122 hours)

The didactic component of the second year is comprised of *current literature review seminar and resident topic presentation*.

I. Current literature Review Seminar – (120 hours)

This seminar is designed to educate the fellows about the recent advances and the latest innovation in the surgical and prosthetic techniques in dental implant. The seminar will be conducted once per week (3 contact hours) for a period of 40 weeks.

The fellows are expected to perform a Medline search of the appropriate literature and prepare a reading list of library references from reputable journals.

Recommended Journals

- **Journal of Oral and Maxillofacial Implants.**
(Email: info@quintpub.co.uk http://: www.quintpub.co.uk)
- **Clinical Oral Implants Research.**
(Email: customerservices@oxon.blackwellpubling.com)
- **European Journal of Oral Implantology.**
(Email: info@quintpub.co.uk http://: www.quintpub.co.uk)
- **Journal of Clinical Periodontology.**
(Email: cs-journals@wiley.com)
wileyonlinelibrary.com/journal/jcpe.
- **Journal of Prosthetic Dentistry.**([http://: www.journals.elsevier.com](http://www.journals.elsevier.com))

II. Fellow Topic Presentation – (2 hours)

The fellows are requested to present the second topic towards the end of the program in a similar fashion as required in the first year.

Example of topics selected for fellow presentation in the second year:

1. The possible causes of early crestal bone loss with endosseous dental implants.
2. Biomechanical aspects of implant-tooth connection.
3. Failure of dental implants: surgical and prosthetic influencing factors.
4. Short implants vs sinus lifting in the treatment of reduced maxillary posterior ridge: evidence based – decision making.
5. Peri-implantitis – etiology, diagnosis and management.
6. Surgical complications following implant surgery.
7. Maxillary sinus augmentation – crestal versus external: indications, contraindications and complications.
8. Does implant platform switching preserve crestal bone around dental implants?
9. Socket shield technique for ridge preservation.
10. The use of PRF in implant dentistry.

B. Case Presentation Seminar – (120 hours)

This seminar will be conducted in weekly bases (3 hours contact) for a period of 40 weeks. During the seminar, the fellows will have a chance to present the follow up of their previously treated cases and criticize their results. Also, they are requested to present the new and ongoing cases and to discuss treatment plans and their clinical cases progress. In addition the session will involve

reviewing some of the interesting clinical cases published in reputable clinical dental implant journals.

- **Clinical Training- (1280 hrs / 40 weeks ~ 32 hrs/ week)**

The fellows will be assigned 9 clinical sessions per week for patient's treatment for a period of 40 weeks. This is to enable them to carry on and complete the cases they started in the first year. Also the fellows will have a chance to treat some advanced implant cases such as:

- Ridge augmentation before or during implant placement surgery
- Soft tissue grafting before, during or after implant placement surgery
- Internal sinus lifting procedures
- External (window) sinus lifting procedures (with or without implant placement)
- Autogenous (chin (symphyseal)/ramus) grafting procedures
- Split ridge (with or without implant placement)
- Immediate implant/immediate loading
- Full mouth rehabilitation of edentulous patients with implant supported fixed restorations
- Guided implant surgery technique
- Management of failing/failed implant cases
- Interdisciplinary treatment with other specialties

Also the fellows are expected to continue practicing single implant cases as well as completing the required treatment of cases from previous graduates.

I. Clinical Objectives

The clinical objectives for the second year are to accurately evaluate the result of the implant therapy (surgical and prosthetic) and implement a consistent recall program. Also, the fellows will be exposed to some advanced clinical and prosthetic implant cases and trained in full management and treatment of such case.

II. Clinical Requirements

The fellows are expected to complete the surgical and prosthetic treatment of a minimum of **50 implant cases** divided as follow:

- Implant placed after or with ridge augmentation (GBR) – **8 cases**
- Implant placed after or with soft tissue grafting – **5 cases**
- Internal sinus lifting – **10 cases**
- External sinus lifting – **2 cases**
- Split ridge technique – **4 cases**
- Symphysial (Chin) graft – **2 cases**
- Retromolar (Ramus) graft – **2 cases**
- Immediate implant placement – **5 cases**
- Immediate implant loading – **5 cases**
- Immediate placement, immediate loading – **4 cases**
- Full mouth rehabilitation – **2 cases**
- **Guided implant surgery (full mouth) – 1 case.**

Study Session

The fellows will be given one session every other week during the first year of the program for visiting the library and for self study.

Holidays and Vacations are per the Saudi Commission for Health Specialties by-laws.

Fellow Evaluation

According to the rules and regulations of the Saudi Commission for Health Specialties, the following elements of evaluation will be carried out:

I. Periodic evaluation:

An evaluation of the fellow performance in the program will be conducted every 6 months by the supervisors in each training center using the evaluation forms approved by the Saudi Commission for Health Specialties. This is to determine whether they are meeting the qualitative and the quantitative standards of the program.

Documentation of the fellow progress and activities in the program should be always available for review by each fellow.

II. Publication / Case Presentation:

At the end of the training program, each fellow has to complete one of the followings:

- Literature review paper submitted to one of the recognized dental implant journals.
- Case presentation or poster presented in one of the dental meetings national or international.

III. Examination:

First Year - End Year Examination

Before attempting the first year exam, the fellows should provide evidence of completing the minimum clinical requirement for the first year.

The first year exam consists of 2 parts (written and oral) which are prepared by the scientific committee of SF-DI in the Scfhs:

a. Written Examination:

A written examination consisting of 120 MCQ (2 hours) shall be undertaken (fellows are referred to the general examination rules and regulations of the SCHS for details).

b. Oral Examination:

Fellows should present 2 full treated cases, during which the fellows will have the oral examination in relation to their cases and some of the theoretical material covered during the year. The exam will take around 40 minutes for each fellow (20 minutes presentations and 20 minutes questions).

Passing Score:

A 50% score for the written examination, 20% for the oral examination and 30% for the continuous assessment are required with an average passing score of 70% in total.

Second Year - Final Examination

The second year final examination consists of 2 parts (written and OSCE/SOE). which are prepared by the scientific committee of SF-DI in Scfhs.

a. Written Examination:

A written examination consisting of 120 MCQ (2 hours) shall be attempted (fellows are referred to the general examination rules and regulations of the SCHS for details).

Passing Score:

A 70% passing score is required for the written examination. However, if the average passing score was less than 70%, an adjustment for the passing grades can be performed for a new score of 65%. It is not allowed to adjust the passing score of less than 65%.

a. OSCE/SOE:

A minimum of 8 exam stations (all OSCE or all SOE or both) will be arranged by the examination committee. The exam stations will be divided through 3 specialties: implant – periodontics, implant – prosthodontics and implant – oral surgery. Each station will be timed between 10-15 minutes at maximum.

Passing Score:

A 70% passing score is required for the total number of stations with a minimum passing score of 60% for each station.

Program Certification

The successful fellow will be awarded with a fellowship certificate in implant dentistry (SF-ID) from the “**Saudi Commission for Health Specialist**” and will be graded as “**Consultant in Implant Dentistry**”.