

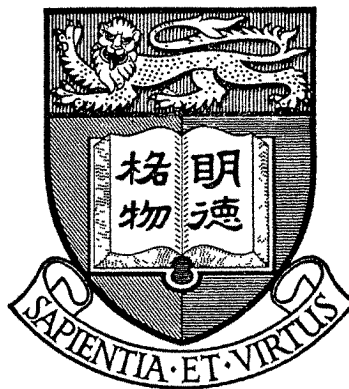
Faculty of Dentistry - University of Hong Kong

Student's Guide
to the
3rd Year Undergraduate Programme
in

Oral **R**ehabilitation

1997-98

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Preface

It is hoped that you will find this guide helpful while you prepare for the scheduled teaching sessions in Oral Rehabilitation.

The details included here are (we think) correct at the time of printing but may be subject to changes in response to feedback on the course which we hope to receive from both students and staff.

We will try to let you know about any (as yet unforeseen) changes in the programme as soon as possible.

Please let us know your views on the course and on this guide.

J.E. Dyson
November 1997

Contributors

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Scope of Oral Rehabilitation

Oral Rehabilitation is a new grouping of subjects within the undergraduate dental curriculum.

It is primarily concerned with the achievement and maintenance of oral health for individuals who have lost some (or all) of their natural teeth, associated structures or other oral and facial tissues.

The undergraduate programme in Oral Rehabilitation extends from the 2nd to the 5th years of the BDS course and will include the following subject areas:

- **removable prosthodontics**
the replacement of missing teeth (and other oral structures) by means of dentures (removable prostheses)
- **fixed prosthodontics**
the replacement of missing teeth *etc.* by means of bridges (fixed prostheses)
- **maxillofacial prosthodontics**
the replacement of missing maxillofacial structures by prostheses
- **gerodontology**
the dental care of elderly persons
- **implantology**
the replacement of missing teeth *etc.* by using devices which are surgically inserted into the bone and to which the prostheses are attached
- **occlusion**
the study of contacts between opposing teeth

- **craniomandibular dysfunction**

the study and treatment of disorders of function of the temporomandibular joint and associated parts of the masticatory apparatus

Amongst other related subjects, the course will also cover relevant aspects of the following:

- **infection control**

the prevention of transmission of infections between patients and between patients and dental personnel during the course of prosthodontic treatment

- **applied dental materials**

the application of dental materials to the practice of prosthodontic treatment

- **dental technology**

laboratory procedures relating to the practice of fixed and removable prosthodontics

Teachers and teaching groups

Full-time Teachers in Oral Rehabilitation

- Dr. M.G. Bothelo (*Coordinator for occlusion and bridge courses*)
- Dr. T.W. Chow (*Postgraduate Programme Director*)
- Dr. A.P.L.H. Dias (*3rd Year Course Coordinator,
4th floor Clinic Director*)
- Dr. J.E. Dyson (*5th Year Course Coordinator,
Undergraduate Programme Director, 4th floor Line Manager*)
- Dr. C.M. Leung (*2nd Year Course Coordinator*)
- Dr. H.N. Pow (*4th Year Course Coordinator*)

3rd Year Group Teachers

- | | |
|-----|---------------------------------|
| 3.1 | Drs. D.M. Robinson & J.E. Dyson |
| 3.2 | Dr. Y.N. Leung |
| 3.3 | Dr. H.C. Shum |
| 3.4 | Dr. D.M. Robinson |
| 3.5 | Dr. K.C. Yeung |
| 3.6 | Dr. W.C. Chung |
| 3.7 | Dr. B.C. Wu |

Overview of the 3rd year programme

The 3rd year undergraduate programme in Oral Rehabilitation includes:

- continued clinical experience on the treatment of patients requiring removable partial dentures
week 1 of clinical skills period I to week 5 of clinical skills period II
31 sessions total
- a laboratory course on repairs and additions to removable partial dentures
weeks 12 – 14 of semester 2
3 sessions total
- lectures and seminars on removable partial dentures
3 lectures and 5 seminars

Aims of the 3rd year programme

By the end of the 3rd year the student should:

- have a good knowledge and competence in the the examination, treatment planning and denture design for partially dentate patients
- be competent in all the clinical procedures involved in the provision of removable partial dentures
- have an understanding of the relationship between removable partial denture prosthodontics and other clinical disciplines
- have an understanding of the clinical and laboratory procedures associated with the repair of removable partial dentures and the addition of teeth and other components to removable prostheses

Students should also have achieved all the aims of the 2nd year programme. *i.e.* they should:

- have an understanding of the importance of, and a competence in basic infection control measures in prosthodontic practice
- be able to identify the major surface anatomical landmarks of the dentate and partially dentate mouth
- be able to carry out a basic examination of dentate and partially dentate patients
- be able to make alginate impressions of dentate partially dentate patients with correct vestibular extension
- be able to pour and trim study casts from alginate impressions
- be able to make facebow records and interocclusal records and to mount study casts in the Dentatus and Denar articulators
- have an understanding of basic terms relating to articulators and occlusion
- be able to demonstrate occlusal contacts in the mouth and on articulated study casts
- have a basic understanding of the handling characteristics of those dental materials involved in the production of articulated study casts (impression compound, alginate, alginate adhesive, dental wax, dental plaster, dental stone, cobalt-chromium alloy and investment material)

- have an understanding of the principles of: treatment planning for patients with missing teeth, cast surveying, removable partial denture design, and tooth preparation to facilitate provision of a removable partial denture
- have an understanding of the laboratory procedures involved in the production of study casts and removable cobalt chromium framework partial dentures
- be able to carry out surveying of casts of a partially dentate patient
- be able to describe, in general terms, the consequences to the patient of tooth loss, and the principal advantages and disadvantages of the alternative means of replacing missing teeth
- be able to describe the potential harmful effects of removable partial dentures and the means by which these may be avoided

Clinical and course requirements

By the end of the 3rd year the student should have:

- satisfactorily completed the 2nd year programme
- passed the written Compulsory Class Examination in Oral Rehabilitation
- passed the class test in surveying and removable partial denture design
- 5 patients requiring provision of removable partial dentures assigned to them
- completed the treatment of 3-5 of those assigned patients

Overall objectives of the undergraduate programme in Oral Rehabilitation

The undergraduate programme in Oral Rehabilitation extends from the 2nd to the 5th years of the BDS curriculum and is designed to develop in the student a competence in achieving and maintaining oral health of individuals who have lost some (or all) of their natural teeth, associated structures or other oral/ facial tissues. In particular it is intended to provide the student with a knowledge of the principles and practice of:

1. Assessment of occlusion and mandibular function of dentate patients.
2. Diagnosis and treatment planning for partially dentate and edentulous patients taking into account the inter-relationship between fixed and removable prosthodontics and other disciplines.
3. The clinical and laboratory use of dental materials relevant to fixed and removable prosthodontics.
4. Removable partial dentures prosthodontics.
5. Conventional and resin bonded fixed prosthodontics.
6. Complete denture prosthodontics.
7. Overdenture treatment.
8. Immediate replacement denture treatment.
9. Dental technology procedures related to fixed and removable prosthodontics.
10. The planning of minor surgical procedures related to the provision of prostheses.
11. Management of occlusal and temporomandibular joint disorders.
12. Infection control measures in fixed and removable prosthodontics.

and an understanding of the basic principles of:

13. Implants.
14. Prosthetic treatment of patients with congenital and post-surgical defects involving oral and maxillo-facial structures.
15. Precision attachments.
16. Sectional dentures.

By the end of the 5th year of the course the student is expected to be able to:

1. Assessment of occlusion and mandibular function of dentate patients.

- a) Describe the occlusal and mandibular functions of "normal" dentate individuals.
- b) Perform a basic clinical examination, and detect the presence of disturbances of temporo-mandibular joint function.
- c) Make impressions of dentate arches with correct vestibular and posterior extension.
- d) Pour and trim study casts.
- e) Make jaw relationship records to enable the casts to be mounted in a semi-adjustable articulator and to allow the articulator to be correctly adjusted.
- f) Mount casts in the articulator and make appropriate articulator adjustments.
- g) Assess the occlusion of articulated study casts and identify and describe occlusal contacts.
- h) Describe the design of occlusal overlay appliances, overlay dentures and their role in the management of occlusal problems and protection of the dentition.

2. Diagnosis and treatment planning for partially dentate and edentulous patients.

- a) Obtain an appropriate history and carry out suitable extra-oral and intra-oral examination of partially dentate and edentulous patients with regard to their oral health and prosthetic needs.
- b) Plan and carry out (or when appropriate, refer for) further necessary diagnostic investigations.
- c) Identify conditions relevant to the management of patients requiring prostheses.
- d) Recognize and understand the significance of anatomical features, pathological, functional and psychological conditions (including those associated with aging) which may affect the provision or outcome of prosthetic treatment.
- e) Plan treatment to achieve and maintain oral health, setting out the prosthodontic and other items of treatment required in an appropriate order.
- f) Recognize those prosthodontic or other problems that are beyond the scope of their ability to treat and to arrange appropriate specialist referral.

3. The clinical and laboratory use of dental materials relevant to fixed and removable prosthodontics.

- a) State the principal constituents, clinical applications and behaviour of the types of materials commonly used in fixed and removable prosthodontics.
- b) Explain the reasons for selection of particular types of material for particular applications in prosthetic treatment.
- c) Correctly handle the materials commonly used in fixed and removable prosthodontics and explain the underlying reasons for manufacturers' instructions.
- d) Recognize and account for errors, faults and discrepancies due to behavioral and structural aspects of materials used.

4. Removable partial dentures prosthodontics.

- a) Survey study casts and prepare appropriate cast cobalt chromium framework and acrylic denture designs (including provisional and transitional denture designs) for partially dentate patients.
- b) Design restorations for abutment teeth that provide for optimal placement of partial denture components.
- c) Plan and execute tooth preparation procedures necessary to accomplish the proposed denture design.
- d) Demonstrate an ability to provide appropriate motivational and post-insertion instructions to patients.
- e) Carry out all the clinical procedures associated with the construction of cast cobalt chromium framework and acrylic dentures.
- f) Carry out the clinical procedures associated with repairs, relining and modification (by artificial tooth addition [including immediate additions], clasp repair and addition *etc.*) of partial dentures.
- g) Recognize problems associated with design, aesthetic and functional aspects of existing partial dentures.

5. Conventional and resin bonded fixed prosthodontics.

- a) Determine when the restoration of an edentulous space with bridgework is clinically needed.
- b) Identify risk factors of the patient, their oral health and the abutment teeth with respect to suitability of providing a fixed prosthodontic appliance.
- c) Diagnose and plan treatment for a patient for whom the provision of a fixed bridge may be the treatment of choice.
- d) Describe the indications, contraindications, advantages and disadvantages of different forms of bridge design, e.g. fixed-fixed, fixed-movable, cantilever, resin bonded and conventional.
- e) The design considerations necessary for improving resistance and retention form of teeth for fixed prosthodontics.

- f) Select suitable teeth for abutments and retainers for both conventional and resin-bonded bridges.
- g) Select suitable designs of pontics.
- h) Design and construct connectors for both fixed and removable bridges.
- i) Carry out conventional bridge abutment preparation on teeth to receive a fixed bridge and the other clinical procedures for the provision of such restorations.
- j) Describe the laboratory procedures for the construction of conventional and resin bonded bridges.
- k) Advise patients on home care when a fixed appliance has been provided.
- l) Produce accurate study casts, face bow record, and jaw relationship records to mount the casts on the Denar articulator for the planning and provision of bridges.

6. Complete denture prosthodontics.

- a) Assess design, functional and aesthetic aspects of patients' existing complete dentures.
- b) Make an assessment of the expected prosthetic difficulties of complete denture provision, based on the history and examination of the edentulous patient.
- c) Identify the need for, and carry out modification of existing dentures (e.g. use of tissue conditioners, occlusal correction *etc.*) prior to construction of new dentures.
- d) Carry out all the necessary clinical and chairside procedures associated with the construction of complete dentures (including provision of appropriate patient instructions).
- e) Identify the need for, and carry out the clinical procedures of relining or rebasing complete dentures.
- f) Carry out the clinical procedures associated with the repair, border modification and occlusal correction of complete dentures.

- g) Identify pathological conditions associated with the wearing of complete dentures and to plan (and, if appropriate, carry out) suitable corrective action.
- h) Describe the rationale for, and techniques associated with, the use of replicas of existing dentures in the construction of new complete dentures.

7. Overdenture treatment.

- a) Identify patients who would be appropriately treated by complete overdentures and provide appropriate counseling.
- b) Select suitable teeth for use as overdenture abutments.
- c) Carry out the preparation of teeth as domed overdenture abutments.
- d) Describe the advantages, disadvantages and use of precision attachments and magnets in overdenture treatment.
- e) Carry out the clinical procedures associated with the construction of complete overdentures on domed abutments.

8. Immediate replacement denture treatment.

- a) Identify patients who would be appropriately treated by provision of partial or complete immediate replacement dentures.
- b) Carry out the clinical procedures (including cast trimming) associated with the construction, insertion and maintenance of partial and complete immediate replacement dentures (where few natural teeth are immediately replaced and alveolotomy is not required).
- c) Demonstrate an ability to provide patients with appropriate pre-treatment and post-insertion counseling.
- d) Describe the indications for, contraindications to, and procedures of alveolotomy and alveolectomy in the context of immediate replacement denture treatment.

9. Dental technology procedures related to fixed and removable prosthodontics.

- a) Describe the laboratory procedures related to the construction and maintenance of bridges, partial and complete dentures (including overdentures and immediate replacement dentures).
- b) Write clear laboratory instructions.
- c) Carry out chairside procedures appropriate to general clinical practice including:
 - Pouring casts
 - Mounting/remounting casts in a semi-adjustable articulator
 - Making adjustments to the positions of teeth in wax dentures or to the contours of trial wax-ups
 - Carrying out chairside occlusal and other necessary adjustments of prostheses

10. The planning of minor surgical procedures relating to the provision of bridges and dentures.

- a) Recognize anatomical and pathological conditions that require surgical treatment prior to construction of prostheses.
- b) Describe, in general terms, the minor surgical procedures which may be necessary prior to prosthesis construction.
- c) Counsel the patient on matters relating to pre-prosthetic surgery.
- d) Prepare appropriate records (study casts, surgical template or wax up of artificial teeth *etc.*) and write referral notes which will effectively communicate the intended treatment to the oral surgeon.

11. Management of occlusal and temporomandibular joint disorders.

- a) Produce accurate study casts, face bow record, jaw relationship records and to mount the casts on the Denar or Dentatus articulator for the purpose of carrying out occlusal analysis.
- b) Carry out diagnosis and treatment planning for the purpose of achieving a 'functional' occlusion.
- c) Carry out occlusal adjustments to facilitate the provision of fixed or removable prostheses.
- d) Know how to identify a patient with undesirable functional or parafunctional tooth contacts.
- e) Describe the rationale of occlusal equilibration
- f) Describe the possible effects of undesirable tooth contacts on the teeth, periodontal tissues and temporomandibular joints.
- g) Know how to manage undesirable tooth contacts.
- h) Manage patient with acute craniomandibular dysfunction.

12. Infection control measures in fixed and removable prosthodontics.

- a) Demonstrate an awareness of infection control problems in fixed and removable prosthodontics and a competence in standard infection control procedures.

13. Implants.

- a) Describe the principles of osseointegration in relation to dental implants.
- b) Describe, in general terms, the restorative aspects and role of osseointegrated dental implants in fixed and removable prosthodontics.

14. Prosthetic treatment of patients with congenital and post-surgical defects involving oral and maxillo-facial structures.

- a) Demonstrate a basic knowledge of the role of the prosthodontist in the treatment of patients with congenital and post-surgical defects involving oral and maxillo-facial structures.

15. Precision attachments.

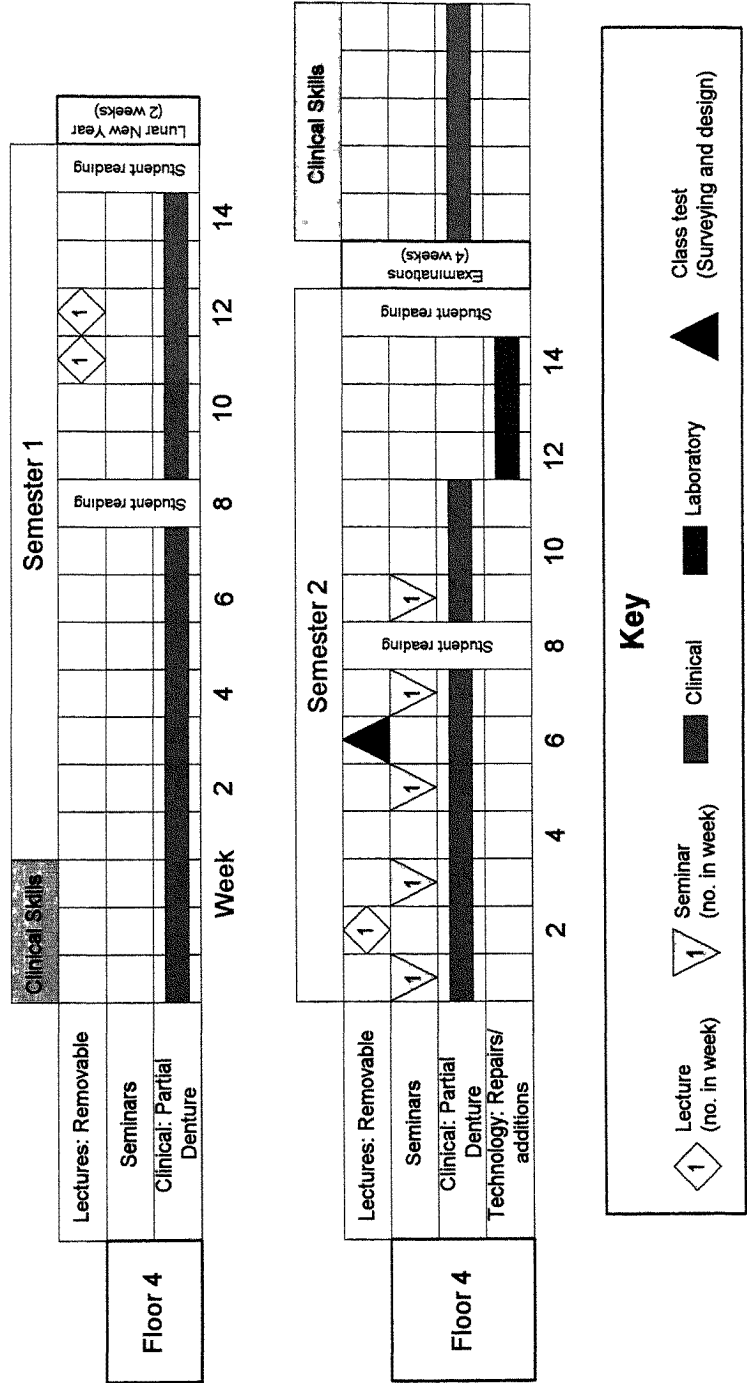
- a) Give a general description and classification of the various types of precision attachments.
- b) Demonstrate an understanding of the principal advantages/ indications and disadvantages/contraindications of precision attachments in fixed and removable prosthodontics.

16. Sectional dentures.

- a) Describe the general principles of sectional dentures.

Timeline Chart of 3rd Year Programme

3rd Year Undergraduate Programme in Oral Rehabilitation 1997-98



Recommended texts

Textbooks

- McCracken's Removable Partial Prosthodontics
McGivney and Castleberry, 9th edition. Mosby, 1994
- Fenn, Liddelw and Gimson's Clinical Dental Prosthetics
MacGregor, 3rd edition. Wright, 1989.

General Reading

- Glossary of terms in fixed and removable prosthodontics
Oral Rehabilitation, Faculty of Dentistry, University of Hong Kong
- Academy of denture prosthetics : Principles, concepts, and practices in prosthodontics.
J Prosthet Dent 61(1) : 88-109, 1989.

Supplementary Reading

- Dental technology.
Blakeslee R.W. Mosby, 1980.
- Clinical removable partial prosthodontics.
Steward K.L., Rudd K.D. & Kuebber W.A. St. Louis : Ishiyaku EuroAmerica, 1992.
- Partial removable prosthodontics.
Kratochvil F.J. Philadelphia : Saunders, 1988.
- Partial dentures.
Neill D.J. & Walter J.D. Oxford : Blackwell, 1983.
- Removable denture prosthodontics.
Grant A.A. Edinburgh : Churchill Livingstone, 2nd ed., 1992.
- Color atlas of removable partial dentures.
Davenport J.C., Basker R.M., Heath J.R. & Ralph J.P. Mosby-Wolfe, 1988
- Removable partial prosthodontics : a case-orientated manual of treatment planning.
Lechner S.K. & MacGregor A.R. Wolfe, 1994.

NB: Recommended references for individual seminars are listed in a later section. Files containing copies of these references will be distributed to each group.

Sessional timetables - Removable Prosthodontics - Year 3

Semester 1

Week	Lectures	Clinical
1		Patient Treatment Continued from Year 2
2		
3		
4		
5		
6		
7		
8	Student Reading	
9		Continued Patient Treatment
10		
11	Transitional and interim partial dentures	
12	Precision attachments and sectional dentures	
13		
14		
15	Student Reading	

Semester 2

Week	Lectures	Seminars	Technology	Clinical
1		Further aspects of RPD Design – Conservative Considerations		Continued Patient Treatment ↓
2	Maintenance of RPDs – additions, repairs and relines			
3		Further aspects of RPD Design – Periodontal and Orthodontic Considerations		
4				
5		Additions to RPDs		
6	Class test: Surveying and removable partial denture design			
7		RPD Repairs - 1		
8	Student Reading			
9		RPD Repairs - 2		Continued Patient Treatment ↓
10				
11				
12		Addition of Teeth and Flange to Upper RPD		
13		Repair of Fractured Clasp of RPD		
14		Repair of Fractured Complete Lower Denture		
15	Student Reading			

Contents of lectures – Removable partial denture course - Year 3

Lecture: Year 3 Semester 1 Week 11
Title: Transitional and Interim Partial Dentures
Lecturer: JE Dyson

Definitions

Designs of simple interim dentures

- spoon denture
- Every denture

Indications for transitional partial dentures

- some remaining teeth have poor prognosis - *but that*:
immediate extractions not required

Types of transitional partial dentures

- to allow conversion to more extensive partial denture
- to allow conversion to complete denture

- tooth (tooth/mucosally) supported
- mucosally supported

Principles of design of transitional partial dentures

- appropriate major connector (to allow attachment of additional teeth/saddles)
- this may, however, unavoidably compromise remaining dentition
- appropriate base extension (border seal of converted denture)

Special requirements of impressions

- extension
- recording of supporting soft tissues

Jaw relationships

- establishment of:
 - occlusal plane
 - vertical dimension
- ICP vs. CJR
- recording techniques

Extending/converting transitional partial dentures

- clinical procedure
- laboratory procedures

Examples of clinical cases treated by transitional partial dentures

Precision attachments

Introduction

- general description
- use on natural tooth abutments and implants
- historical background, e.g. Chayé's attachment (1906)
- role in restorative dentistry

Nomenclature (definitions)

- precision attachments (prefabricated attachments)
- semi-precision attachments (custom made attachments)

Parts (matrix, patrix)

Joint

- "fixed", movable, "stress-breaking" joint (springs)

Retention

- friction, locking mechanism

Classification

- intracoronal
 - advantages/disadvantages
 - examples of prefabricated and custom made types
- extracoronal
 - advantages/disadvantages, examples
- studs
 - types, applications, examples
- bars
 - types, applications, examples
- miscellaneous
 - screws, posts, bolts, hinges etc., examples and applications

Magnets and their use in overdentures

Advantages of precision attachments

- aesthetics, mechanical aspects (retention, support, stability)

Disadvantages of precision attachments

- tooth preparation, expense/time, technique sensitive
- requires careful treatment planning and preparation
- difficult to maintain and repair

Sectional dentures

- principles
 - use of multiple paths of insertion, examples
- problems/dangers associated with unilateral designs

Need for periodic recall of patient to review:
 protheses
 supporting base and soft tissues

Changes in protheses
 poor hygiene - staining, plaque, calculus
 fracture or distortion of components
 fracture of teeth/base
 loss of OVD due to wear of occlusal surfaces of teeth

Changes in tissues
 caries
 periodontal disease
 resorption of alveolar bone
 inflammation (denture induced stomatitis, chronic atrophic candidiasis)

Diagnosis and management of the above problems

Repairs to
 components
 base

Addition of teeth

Relining - indications, clinical and laboratory procedure

Contents of seminars – Removable partial denture course - Year 3

Seminar: Year 3 Semester 2 Week 1

Title: Further Aspects of RPD Design - Conservative Considerations

Need for treatment planning

- critically assess prognosis carious/fractured/non-vital teeth
- design RPD before commencing Cons treatment
- incorporate undercuts, rest seats etc. in restorations in abutment teeth
- abutment preparation incorporating rest seats *etc.*

Fabrication of restorations to fit existing prostheses

Temporary crown during RPD construction

Recommended reading

1. Smith B.J. & Turner C.H. : The use of crowns to modify abutment teeth of removable partial dentures. 1. Introduction and partial denture design. J Dent 7(1) : 52-56, 1979.
2. Smith B.J. & Turner C.H. : The use of crowns to modify abutment teeth of removable partial dentures. 2. Clinical and laboratory procedures. J Dent 7(2) : 98-104, 1979.
3. Kaldahl W.B. & Becker C.M. : Prosthetic contingencies for future tooth loss. J Prosthet Dent 53(1) : 1-6, 1985.

* = key reference

Periodontal

plaque - increase in quantity and pathogenicity

Pretreatment assessment of plaque control

Consider physical ability of patient to effect plaque control

Assess periodontal condition of remaining teeth, especially the potential abutments

quality and extent of periodontal support of abutments
progress of periodontally affected teeth

Treatment planning for interim prostheses during active phase of periodontal treatment, in consultation with the periodontologist

Treatment planning for definitive prosthesis, considering patients' periodontal condition, plaque control and progress of existing teeth

Orthodontic

teeth could be moved before RPD treatment to improve occlusion
aesthetics, and to facilitate RPD design in consultation with orthodontist

Recommended reading

1. Jacobson T.E. : Periodontal considerations in removable partial denture design. *Compend Contin Educ Dent* 8(7) : 530-539, 1987.
2. Renner R.P. : Periodontal considerations for the construction of removable partial dentures (I). *Quint Dent Tech* 9(3) : 169-172, 1985.
3. Renner R.P. : Periodontal considerations for the construction of removable partial dentures (II). *Quint Dent Tech* 9(4) : 241-245, 1985.
4. Ceen R.F. & Rubler C.G. : Orthodontic intervention as an aid in restorative dentistry. *Dent Clin North Am* 29(2) : 279-291, 1985.

* = key reference

Indications for addition of teeth or flange to:

existing RPD to replace teeth lost due to extractions/trauma

- abutment

- non abutment

existing transitional RPD to convert to CD

existing RPD following minor surgery on alveolar ridges/soft tissues

existing RPD following accidental fracture of flange

Assessment of RPD for suitability for addition of teeth/flange

Addition of preformed stainless steel clasps

Clinical and laboratory procedures in addition to RPDs

Recommended reading

- 1.* McGivney G.P. & Castleberry D.J. : McCracken's removable partial prosthodontics. 9th ed. 1995.
Chapter 21 : Repairs and additions to removable partial dentures.
2. Grasso J.E. & Miller E.L. : Removable partial prosthodontics. 3rd ed. 1991.
Chapter 17 : Repairs, additions and modifications. 286-288.

* = key reference

Seminar: Year 3 Semester 2 Week 7
Title: RPD Repairs - 1

Causes of clasp fracture

- accidental
- faulty design
- attempts at adjusting clasp by bending or trimming

Repairs

- fractured clasp, occlusal rests
- fractured major/minor connector
- loss of prosthetic tooth from RPD
- soldering components

Clinical and laboratory procedures in repairs

Recommended reading

- 1.* McGivney G.P. & Castleberry D.J. : McCracken's removable partial prosthodontics. 9th ed. 1995.
Chapter 21 : Repairs and additions to removable partial dentures.
2. Grasso J.E. & Miller E.L. : Removable partial prosthodontics. 3rd ed. 1991.
Chapter 17 : Repairs, additions and modifications. 284-285.

* = key reference

Causes of clasp fracture

- accidental
- thickness insufficient
- deep notches for frena and muscle attachments etc.
- fracture of acrylic resin off cast framework

Assessment of base for suitability for repair

Preparation of base for repair

Repair procedure

- clinical
- laboratory

Recommended reading

- 1.* McGivney G.P. & Castleberry D.J. : McCracken's removable partial prosthodontics. 9th ed. 1995.
Chapter 21 : Repairs and additions to removable partial dentures.
2. Grasso J.E. & Miller E.L. : Removable partial prosthodontics. 3rd ed. 1991.
Chapter 17 : Repairs, additions and modifications. 281-283.

* = key reference

Assessments and examinations

Continuous assessments

Grades are given on an A, B, C, D and F scale. These grades correspond to the following comments:

A = excellent, B = good, C = satisfactory, D = weak, F = very poor

Grades on this scale will be given by your Group Teacher for each patient appointment and for seminars. Grades will also be given by your Dental Technology Instructor for your performance on the laboratory course on repairs and additions.

Near the end of each Semester your Group Teacher and an additional full-time teacher will review your progress and your family of patients. They may also carry out a short chairside interview/oral test during the course of your normal clinical session. They will then award overall grades (on the above scale) for “academic progress”, “practical ability”, “professional qualities” and will note your attendance on the teaching sessions and any problems which you have had. These assessments will be discussed with you and then sent to the Faculty Office for entry in your student records.

If you have reason to disagree with the assessment grades given you should bring the matter to the attention of the Undergraduate Programme Director, Dr. J.E.Dyson.

Class Test and Compulsory Class Examination

In week 6 of semester 2 there will be a one-hour practical Class Test on surveying and removable partial denture design. Furthermore, in the April examination period of 1998 there will be a 3-hour written Compulsory Class Examination on all the subjects covered in Oral Rehabilitation up to that time. Further details of the Class Test and the written Compulsory Class Examination will be given to you at a later date.

Guidelines for Clinical Practice on the 4th floor clinic

The following guidelines and instructions apply specifically to work carried out on the 4th floor clinic. Students working on other clinics (whether or not they are carrying out treatment for a patient under supervision of Oral Rehabilitation Staff) must comply with the instructions and orders that apply to that clinic.

These guidelines are formulated to:

- ensure the best possible conditions for patient treatment
- ensure the smooth running of the Oral Rehabilitation clinics
- help students to complete their clinical requirements on time

General

Patients should be treated with care, politeness and consideration at all times.

Uniforms should be worn in the clinic at all times whether treating patients or carrying out bench procedures (such as treatment planning, surveying casts or designing prostheses).

Students should conduct themselves in the clinical areas in an orderly and professional manner. They should not congregate in treatment bays or other areas of the clinic in groups and should avoid conversing in a loud voice with each other or with supporting staff.

Treatment bays should be kept as clean as possible at all times.

Attendance

Attendance at all scheduled clinical sessions is compulsory. Leave of absence, may however, be granted by the Faculty (through application to the Dean) to enable students to participate in approved Faculty/University activities. Inability to attend for other reasons, such as illness or unavoidable personal circumstances, should be communicated to the Faculty office and to the Group Teacher (or, if he/she is

unavailable, the Oral Rehabilitation office). The 4th floor receptionist should also be informed so that patients can be rescheduled or alternative arrangements made for their treatment.

The clinical work that should be completed by the end of the 3rd year is set out in the "Clinical Requirements" section of this manual.

Allocation and referral of patients

Patients treated on the 4th floor clinic should be allocated by Oral Rehabilitation staff from the waiting lists or after appropriate referral from other clinics. Patients referred from other clinics should have a formal request for the referral entered in the patient's records and this should be signed by the referring staff member. The 4th floor clinical teacher must be consulted before treatment is commenced.

Failure to follow these procedures may result in the case not being credited towards the student's clinical requirements.

Patients allocated to students on the 4th floor clinic should not be taken to other clinics for consultation or treatment without the agreement of the 4th floor Group Teacher and the appropriate referral being entered and signed in the patient's records.

Booking/cancelling appointments

Students are advised to book patients appointments as early as possible. In most cases, each patient should have his/her next appointment arranged at the reception desk before leaving the Hospital. Other appointments should be booked through the 4th floor receptionists at least three (3) days before the attendance date. If telephone contact is not possible, the appointment will need to be sent by post and a period of more than 3 days may be necessary. The practice of students independently contacting patients at short notice is inconsiderate and is strongly discouraged. However, if exceptional circumstances make it necessary for a student to arrange or reschedule an appointment outside office hours the 4th floor receptionist should be informed as soon as possible so that the appointment can be recorded, patient records retrieved from the records office, and a treatment bay reserved.

Similar procedures should be followed for cancellations of appointments. All cancellations must be recorded in the patients treatment records (see below) and the notes countersigned by the Group Teacher. It should be clearly stated in the records if the cancellation was at the request of the patient, the student or the Group Teacher. If there is doubt on this point the receptionist may verify the reason for the cancellation by contacting the patient.

Every effort must be made to see each patient at the appointed time. If a student is running late, the patient and the Group Teacher should be informed and an apology made to the patient.

Treatment bays and instruments

Bays will be allocated by the receptionist and Senior Dental Surgery Assistant on a first come, first served basis. The bays allocated to the respective groups will be indicated on the whiteboard outside the large seminar room. Students are requested to occupy only those bays allocated to their group. Last-minute booking of appointments may mean that a treatment bay is not available during that session resulting in potentially serious inconvenience to the patient. In such a situation, the Group Teacher must be immediately informed. In no circumstances should a patient be asked to leave the Hospital without treatment.

Instrument kits, handpieces etc. are available from the 4th floor store and should be checked and signed for when taken out. After use, all instruments should be cleaned, blades removed from Stanley knives/scalpels and returned to the store. Please make sure that all instruments have been checked by the storekeeper before leaving the clinic. Students will be required to pay the replacement cost of any missing instruments.

Supervision

Patients should not be treated without a supervising clinical teacher being present. If the teacher has not arrived within 15 min of the start of the session, the Secretary in the Oral Rehabilitation office must be informed.

Treatment

No patient should be brought into the clinic without the patient's treatment folder or without the knowledge of the receptionist. The patient should be personally escorted to the treatment bay by the student. No treatment should be started without approval of the treatment plan by the Group Teacher. The treatment proposed for that session should be discussed with the teacher at the start of the session to avoid the wastage of time which may result from any uncertainty about the procedures required.

No more than two patients should normally be booked for each session. If a student wishes to see more than two patients on a session, the Group Teacher's approval should be obtained in advance and the receptionist informed accordingly. Receptionists have been instructed not to book more than two patients per session without the respective teacher's prior approval.

Students should, as far as possible, seek approval of treatment plans/prostheses design *etc.* during clinical sessions. Sufficient time should be allocated on normal clinic session for routine case discussions. Teachers have other duties to perform, and only in exceptional circumstances should requests be made for detailed case discussions to be held outside their normal teaching sessions.

Treatment records

The following treatment records should be completed and countersigned by the Group Teacher immediately on completion of treatment.

- Patients treatment record (day sheet)
- Computer appointment sheet
- Laboratory prescription card (if required).

Teachers may have reason not to sign records that are produced at some later date.

Before discharging the patient the next appointment should be recorded on the day sheet and on the receptionist's appointment sheet. If laboratory work is required, this should also be noted on the laboratory card.

Treatment folders should not be retained by students. They may only be taken away from the clinic areas temporarily for the purpose of completing treatment details but should be returned to the reception desk before the end of the day.

No folder should, at any time, be kept in lockers or taken out of the hospital.

It should be remembered that treatment records are confidential documents and that there are legal obligations associated with their handling.

Discharge/Transfer

Patients allocated in years 2 - 5 should be reviewed at regular intervals and discharged as "treatment completed" only towards the end of year 5. However, all allocated patients should either be discharged (as having had their treatment completed) or transferred to another student for continuing care before the Final BDS Part II examination. Failure to make these arrangements may result in the student concerned failing to be certified as having completed all clinical requirements before being permitted to sit for the examination.

The decision to discharge a patient who was originally allocated to a student from the clinic of another discipline should normally be determined by a teacher in that discipline even if a prosthesis was provided on the 4th floor clinic as part of the treatment plan.

Chairside assistance

All students are encouraged to practice and become competent in preparing and mixing the materials used on the clinic. However, dental surgery assistants who are not otherwise occupied in their duties may be asked to provide help as required. Procedures such as the making of face-bow records or mixing of elastomeric impression materials (whilst attempting to maintain a dry field of operation) should not be attempted single handedly.

Disputes

Part of a student's training involves learning to develop good interpersonal relationships with patients and other members of the dental team (such as dental

surgery assistants, technicians, and reception staff). In most cases, interpersonal problems can be avoided by adopting a calm and professional approach in all discussions. However, if any disagreement or misunderstanding arises between a student and a patient or member of support staff, students should first discuss the problem with their teacher. They should not in any circumstances enter into an argument.

If any student has a problem in the course of their clinical work (or other aspects of study) which cannot be quickly resolved with the help of their Group Teacher they are encouraged to seek the advice of the Undergraduate Programme Director (Dr. J.E. Dyson) or the Clinic Director (Dr. A. Dias) without undue delay.

Clarification of Guidelines

If any of the above guidelines are found to be unclear or if there is any reason for difficulty in complying with them, please contact the Clinic Director, Dr. A. Dias or the Undergraduate Programme Director/Line Manager, Dr. J.E. Dyson.

All clinical procedures carried out on the 4th floor clinic should be performed in accordance with the procedures set out in the latest edition of the *PPDH Infection Control Manual*.

Special procedures relating to the disinfection of impressions and equipment or appliances being transferred to or from the Dental Technology Laboratory are set out below.

Transfer of laboratory work and impressions

Laboratory work (e.g. casts, dentures, custom trays and wax rims) and impressions, can be adequately disinfected by immersing in a solution of 0.8% sodium hypochlorite for an appropriate period of time. This solution must be discarded at the end of each session.

From laboratory to clinic

All laboratory work to be handled at the clinical appointment must be disinfected in sodium hypochlorite solution in the clinic before patient treatment commences.

From clinic to laboratory

Impressions and all items of laboratory work which have been in direct or indirect contact with the patient must also be disinfected in the same way before transferring to the laboratory.

Surveyors and articulators

These items cannot be disinfected. Therefore, for infection control purposes, chairside procedures involving in the use of these devices should be considered as equivalent to laboratory procedures. The laboratory work involved must be disinfected, and gloves must be changed both before and after the chairside procedure.

Hydrocolloid, plaster and polyether impressions

- Rinse the impression under running water (avoid splashing) and shake off surface water.
- Dip the impression in sodium hypochlorite solution. (The impression and tray must be totally immersed in the solution but should be removed within 1-2 seconds).
- Rinse under running water and shake off surface water.
- Dip again in sodium hypochlorite solution.
- Cover the impression with gauze dampened with the sodium hypochlorite solution and leave for 10 minutes.
- Rinse well under running water and shake off surface water.
- Hydrocolloid impressions should be covered with gauze dampened with water and placed in a polythene bag.
- Attach a label indicating that the impression has been disinfected before dispatch to the laboratory.

All other impressions and items of laboratory work

- Rinse under running water and shake off surface water.
- Immerse in sodium hypochlorite solution for 3-5 minutes.
- Rinse well again under running water.
- Attach a label indicating that the impression/appliance has been disinfected before dispatch to the laboratory.

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