**Lec.1**

**Periodontics**

**Treatment planning for patients With Periodontal Diseases**

The aim of the treatment plan is the coordination of all treatment procedures for the purpose of the establishment and maintenance of a well-functioning dentition in a healthy Periodontal environment.

Caries & periodontal diseases represent opportunistic infections associated with biofilm formation on the surfaces of   
teeth. Factors such as bacterial specificity & pathogenicity as   
well as the disposition of the individual for disease (e.g. Iocal &   
general resistance) may influence the onset, rate of progression   
and clinical characteristics of plaque associated dental   
disorders. Findings from studies, however, have demonstrated   
that treatment, including the elimination or the control of the   
biofilm infection and the introduction of careful plaque control   
measures in most ,if not all cases results in dental &periodontal   
health. Even if health cannot always be achieved and   
maintained, the arrest of the disease progression following   
treatment must be the goal of modern dental care.   
The treatment of patients affected by caries and periodontal   
disease, including symptoms of associated pathologic   
conditions, may be divided into 4 phases

1. Systemic phase of therapy   
2. Initial phase (cause-related therapy)   
3. Correction phase(additional therapeutic measures)   
4. Maintenance phase(supportive periodontal therapy)

**Treatment Goals:**

In every patient with periodontitis, a treatment strategy, including the elimination of the opportunistic infection, must   
be defined and followed. This treatment strategy must also   
define the clinical outcome parameters to be reached through   
therapy. Such clinical parameters include

1.Reduction or resolution of gingivitis (Bleeding on probing, BOP).

2.Reduction in probing pocket depth (PPD).

3.Elimination of open furcations in multi-rooted teeth.

4. Absence of pain.

5 Individually satisfactory esthetics & function.

Note:

BOP measurement :a periodontal probe inserted to the bottom of gingival crevice or periodontal pocket and move gently along the root surface,if bleeding occurs within 30 seconds the site give score(1) and for non-bleeding site, score (0).

PPD measurement : is the distance from the gingival margin to the most apical penetration of the periodontal probe insert into the gingival crevice or periodontal pocket without pressure or force and measure in mm.

**Systemic Phase of therapy includes:**

1) Precautions for protecting the general health of the dental   
team and other patients against infectious & contagious   
diseases e.g. Infectious hepatitis, HIV infection, Herpes   
simplex virus & tuberculosis. As a rule, routine periodontal   
therapy should be postponed in a patient with an active   
contagious state of a disease until the patient has been referred to the physician for medical treatment. As a   
minimal precaution, wearing rubber gloves, masks and   
protective glasses is recommended for all dental therapy in   
all patients. In addition, the dental team may be vaccinated   
against hepatitis.

2) Protection of the patient's health against harmful systemic   
effects of routine therapy.

The complications most commonly encountered in the   
dental office are

|  |  |
| --- | --- |
| Infection | Bleeding |
| Cardio-Vascular Incidents | Allergic Reactions |

* **Infection**: Patients with cardiac disease and disorders   
  involving the endocardium are susceptible to infective   
  endocarditis as a result of blood-borne infection. The   
  procedures that cause this infection are extractions,   
  scaling, root planing, and periodontal & implant surgery,   
  leading to bleeding & bacteremia. Antibiotic prophylaxis 1   
  hour before dental procedure e.g. Amoxicillin,   
  Clindamycin and Azithromycin with a high standard of   
  oral and dental health is reserved for those patients.
* **Bleeding:** Patients on anticoagulant drugs (e.g.Salicylate), liver cirrhosis or high alcohol consumption, blood   
  dyscrasia or hemophilia are at a risk for bleeding   
  complications, thus, following consultation with the   
  Patient's physician, it is recommended to render   
  treatment in small segments.
* **Cardiovascular incidents**: Cardiac patients are often   
  treated with anticoagulant drugs (e.g. Aspirin,   
  lndomethacin) may develop bleeding problems. Other   
  cardiovascular drugs (antihypertensive, diuretic, anti   
  arrhythmic) may increase hypotensive episodes. Stress   
  associated with dental procedures may precipitate   
  anginal pain or congestive heart failure. Therefore, Keep   
  procedures short and control anxiety & pain with those  
  patients.
* **Allergic reaction and drug interactions:** The most   
  common allergic reactions are allergies to local anesthesia (Novocain), Penicillin, Sulfa derivatives and lodine. Such drugs have to be avoided and a consultation with the physician is required to replace drugs. No new drugs should be prescribed as part of periodontal therapy   
  without understanding their interference with the effectiveness of the drugs that the patient is already  
  taking (e.g. Antidepressants) or alcohol, or create   
  hazardous or synergistic action with such drugs.

3) Making allowances for systemic diseases or disorders that   
may influence the etiology of the patient's periodontal

conditions, the healing potential and the systemic response to therapy.

AIl attempts should be made to alleviate (=decrease) the   
effects of systemic disease such as blood disorders and   
diabetes mellitus before the periodontal treatment is   
initiated. clinical experience indicates that the healing   
response of the periodontal tissues is as good in well   
controlled diabetics as in non-diabetic patients, however,   
juvenile diabetics with a lowered resistance to infection may   
require the use of antibiotics following surgery also   
precautions have to be taken to avoid hypoglycemia in such   
patients.   
 Patients taking cortisone over a long period of time may   
yield a reduced rate of fibroblastic activity and hence a   
lowered resistance to infection during healing. It has to be   
realized that periodontal treatment may have a beneficial   
effect on the systemic health of the patient as well. Glycemic   
control may be facilitated in diabetics by successful control   
of the periodontal infection.

**4) Controlling anxiety & low pain threshold:**

It may be advisable to premedicate an apprehensive patient   
by:   
a) Valium to be taken the night before, in the morning, and   
half an hour before extensive or surgical procedure.

b)Apply local anesthesia to control pain.

c) Post-operative analgesics such as Voltaren, Ponstan may   
be prescribed.

5) **Smoking Counseling:**

Cigarette smoking constitutes the second most important   
risk factor in the etiology & pathogenesis of periodontal   
diseases after poor oral hygiene standards. Therefore,   
smoking cessation programs may be instituted as one of the   
primary measures.

**6) Treatment of emergencies**

Such as acute necrotic ulcerative gingivitis or periodontitis,   
Periodontal abscess, acute endodontic periodontal lesion   
and extraction of hopeless teeth.

**Objectives of initial phase (cause – related therapy):**

The measures used in this phase aim at the elimination and   
the prevention of recurrence of supra and subgingivally located bacterial deposits from the tooth surfaces and to arrest the progression of further periodontal tissue destruction. This is accomplished by:

1. Motivating the patient to combat dental disease (patient   
   information).
2. Giving the patient instructions on proper oral hygiene   
   techniques (self-performed plaque control methods).
3. Scaling & root planing.
4. Antimicrobial therapy (local or systemic).
5. Control or elimination of additional retention factors for   
   plaque such as: correction of restorative and prosthetic   
   irritational factors &excavation of caries and restoration.
6. Occlusal therapy.
7. Orthodontic treatment

**Motivation:** Detailed information must be given to the   
patient regarding his/her periodontal disease, its etiological   
factors, symptoms, consequences, prognosis and the   
relationship between the presence of dental plaque and   
calculus in the mouth and the location of sites showing dental   
disease by using plaque disclosing agents. These information   
are aimed at motivating the patient to cooperate in the   
treatment hence without compliance (which has been   
described as the degree to which a patient follows a regimen   
prescribed by a dental professional), a good treatment   
outcome will not be achieved.

Mechanical plaque control demands active participation of   
the individual subject and the establishment of proper oral   
homecare habits is a process that depends on the behavioral   
changes, thus the patient's positive attitude to treatment may   
have a positive long-term effect on his/her tooth cleaning   
efforts. In addition, dental professionals should try to   
emphasize on the role of the patient personal oral hygiene   
procedures in the prevention of dental diseases &they should   
encourage the patient to take responsibility for his/her own   
oral health. Finally, if the clinician can establish the link   
between oral health & general health for the patient, this   
individual may be more willing to establish proper hygiene   
measures as part of his/her lifestyle.

**Disclosing agent:** Since dental plaque is white, sometimes   
it cannot easily be identified, particularly if it is not thick   
enough and/or the observer is not well trained. A disclosing   
agent is a chemical compound (tablets or solution) that stains

dental plaque such as erythrosine, fuschsine or a fluorescein.   
These agents should be used to demonstrate the presence and   
location of plaque in addition to the evaluation of the efficacy   
of the patient's homecare technique thus they should be   
applied after tooth brushing and interdental cleaning.

**Self-Performed Plaque Control:**

Dental plaque is a bacterial biofilm that resides on tooth   
surfaces or soft tissues and is not easily removed from the   
surfaces of teeth. Supragingival plaque is exposed to saliva and   
to the natural self-cleansing mechanisms existing in the oral   
cavity, but such mechanisms do not adequately remove plaque.   
Therefore, the regular use of personal oral hygiene measures   
(refer to the efforts of the patient to remove suragingival   
plaque) is essential to the dental and periodontal health   
because plaque is the major etiological factor in periodontal   
disease thus plaque removal reduce symptoms of inflammation   
(bleeding, redness, swelling), inhibit the progression of the   
disease & inhibit the formation of supra & subgingival calculus   
which is a plaque retentive factor.

Furthermore, meticulous, long-term self-performed plaque   
removal measures can modify both the quantity & composition   
of subgingival plaque therefore, prevention of gingivitis,   
periodontitis and loss of attachment are based on the   
achievement of sufficient plaque removal. These practices   
require not only the appropriate motivation and instruction of   
the patient, but also the adequate tools.