**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.