Oral Surgery/Implantology/Stomatology

1. Principles Pertinent to the Evaluation Criteria

Measures for quality assurance can be phrased in terms of the structure, the process, or the outcome. The structural and processual qualities are primarily determined by the person responsible for the practice management while the quality of the outcome is outlined by professional guidelines which depend on the state of science. Standardization in different quality levels (guidelines A+ to C) is unsuitable for surgical treatments. Rather quality guidelines regarding the clarification of risk factors, the patient information about the treatment goal, and the surgical approach as well as criteria for the evaluation of the outcome can contribute to the assurance of the desired quality. Therefore, the present quality guidelines mainly aim at the assurance of the outcome quality. They were created in collaboration with the professors responsible for oral surgery at the Universities of Basel, Bern, and Zurich as well as with experienced colleagues from private practices.

For the following list of topics, five evaluation criteria are indicated and respective requirements are formulated. The proposed measures and evaluation factors are recommendations whose consideration can lead to an outcome which is satisfactory for the practitioner and the patient.

1. Indication for planned measures
2. Objective of the measures
3. Risk factors affecting the objective
4. Guidelines for the measures to be undertaken
5. Suggestions concerning the evaluation of the outcome

List of topics:

2.1 Medical history
2.2 Collection of findings/diagnosis
2.3 Oral surgery, general
2.4 Acute infections
2.5 Tooth removal
2.6 Apicoectomy/apical surgery
2.7 Cyst operation
2.8 Dental trauma
2.9 Plastic corrections
3. Implantology, surgical aspects
4. Approach to pathologic findings/stomatology

Scope

The recommendations concern patients who have been designated for a surgical intervention in the ambulant practice in local or endotracheal anesthesia (ETA) or for the evaluation of a disease in the masticatory system.

Deviations from the proposed guidelines can occur in individual cases, if the reason is documented, the practitioner assumes responsibility, and the patient or their legal representatives are informed.

The recommendations should assist the practitioner in the work with their patients and protect them against unjustified forensic problems. At the same time, the outcome can be influenced in a positive sense by applying standardized procedures in the context of treatment planning.

2. Evaluation Criteria for Measures in the Area of Oral Surgery

2.1 Medical History

Indication

The medical history has to be taken for every patient and should be complemented in the course of a treatment. At that, it has to be distinguished between the general history dealing with the general medical incidents and the special history. The special history gives information on the development and course of a current dental disease or on the efficacy of the measures taken.

Objective

The medical history provides comprehensive information on the medical antecedents and existing risks of health. It has to be verified whether a planned treatment can be asked of a patient.

In case of ambiguity, the treating physician has to be consulted.

Aggravating Factors

Insufficient cooperation and/or communication can have a negative impact on the anamnesis.

Guidelines

Medical questionnaires are advisable if they are verified by a specific inquiry. They have to be updated upon a further consultation.

In case of emergency, a reduced history is acceptable, which at least sheds light on the current risks of health regarding envisaged emergency measures.

Information on the medical history is documented in the patient chart.

Suggestions for the Evaluation

Retrospective recording of existing risks of health in case of a surgical intervention and complications attributable to missing preoperative information have to be avoided.

2.2 Collection of Findings/ Diagnosis

Indication

There is a distinction between an examination in the absence of information on the existence of a disease (routine) and an examination in the case of current complaints or a disease.

All general medical and specific examinations necessary for the precise planning of a surgical intervention have to be undertaken.

Objective

The objective of an evaluation is the diagnosis or suspected diagnosis. The diagnosis or differential diagnosis constitutes the basis for the treatment plan. As a minimal result, a differential diagnosis is to be aimed for. This goal is to be achieved based on a synopsis of the case history and the examination.

The collection of clinical findings yields objective assessments regarding the external appearance, the neurologic condition, and the function.

The indication for an intervention is based on these records.

Aggravating Factors

- Insufficient understanding of necessary measures on the part of the patient, their relatives, or third parties (insurances)
- Insufficient collaboration of the patient or their relatives, parents (compliance)
- Physical obstacles (obstructions of mouth opening, physical handicaps etc.)
- Psychological barriers
- Pressure of time

Guidelines

The desired result of an evaluation as seen from the perspective of both the patient and the practitioner is documented. Restricting factors regarding the examination must be documented. The risks of diagnostic measures have to be discussed with the patient. The information of the patient about risks in case of omitted necessary evaluations or missing data on risks of health must be documented.

The investigation records all pathologic signs and describes the starting situation.

The oral examination comprises the systematic assessment of the dental and periodontal status, the occlusion and articulation, the mucosal condition, the function, and the sensitivity.

The radiographic examination takes place in a differentiated way from the overview to the detail according to the recommendations regarding radiology.

Additional investigations (possibly arranged with specialists) such as bacteriology, blood analyses, allergy tests, materials analyses are initiated selectively.

If no precise diagnosis can be made, a referral to a specialist within an appropriate period of time is indispensable. This particularly concerns cases of unclear infections and of suspected malignant alterations.

The results are to be documented in the patient chart.

Suggestions for the Evaluation

- Discrepancy between the diagnosis and the corresponding outcome (clinical, radiographic) on follow-up
- Histopathologic finding differing from the diagnosis or differential diagnosis made

2.3 Oral Surgery, General

Indication

Review of diagnoses and the treatment plan; consideration of the risk factors and claims of the patient; alternative proposals and note about the urgency, emergency intervention

Offer time for consideration before an operation in case of interventions of choice.

Documentation of the indication in the patient chart

Objectives

- Creation of the preconditions for the cure of a disease
- Elimination of a pathologic condition
- Improvement or restoration of form and function

Risk Factors

- Local situation regarding risks (anatomy)
- Own competence for the intervention (education, postgraduate training) (cf. SAC criteria)
- Level of difficulty regarding the surgical technique
- Infrastructure and function of the devices
- Imminent risks which can affect the course of treatment and impair the treatment outcome
- Organization of the aftercare
- Communication with the family doctor, during consultations, and in multidisciplinary evaluations
- Immune defense situation
- Anticoagulation (particularly including also new factor Xa inhibitors)/bleeding diatheses
- Anxiety
- Focal infection with risk of spreading
- Tumor patient (radiotherapy)
- Multiple pharmaceutics patient (in particular chemotherapy, bisphosphonates, and denosumab)
- Habits of the patient (smoking)
- Systemic disease (diabetes, osteomalacia)
- Psychological instability in the context of esthetic corrections
- Immunosuppression

SAC criteria
(Sailer, Pajarola: Atlas "Orale Chirurgie")

- S = simple intervention lacking anatomical risks or surgical-technical problems, poor in complications: can be performed by a well-trained dentist in the ambulant practice
- A = advanced intervention exhibiting anatomical risks, minor surgical-technical problems, complications predictable: can be performed by a surgically trained dentist in the ambulant practice
- C = complex intervention, difficult intervention, difficult and elaborate in terms of the surgical technique, complications predictable: can be performed by a dentist experienced in dental-surgical interventions or a maxillofacial surgeon

Guidelines

They define the surgical and other treatment measures in terms of the required caution, which provide the best prospects for a successful result.

The goals of these guidelines are achieved through a targeted promotion of the favorable boundary conditions corresponding to the current state of knowledge and through a reduction of the adverse factors regarding risks and complications. This also includes the determination of guidelines regarding the infrastructure in terms of personnel, rooms, materials, and medication as well as the instrumental equipment and hygiene.

Surgical Work Area

- Surgical interventions are principally performed using sterile instruments.
- Hygiene in the treatment room with clear designation of the sterile zone: operation field, tray for the instruments, auxiliary equipment (drilling device), if necessary possibility to sterilely handle auxiliary equipment (handles of operating light)
- Sterile protective clothing
- Spatial conditions so that a reanimation is possible
- Personnel: trained in dealing with sterile goods and in assistance during surgical interventions, behavior in emergency situations; in addition, personnel has to be available for mastering an adverse intraoperative event.

Device-Related Equipment

- Sterile micromotors
- Sterile water cooling for drill
- Coagulation (optimally bipolator)
- Lighting of the field of work
- X-ray apparatus at the chair
- It has to be ensured that the vital functions of the patient can be monitored (emergency equipment).

Organizational Measures

An emergency organigram must exist which contains information on the behavior in case of emergency as well as the phone numbers of the emergency physician and ambulance.

The procedure and treatment method ultimately are selected by the practitioner based on a personal assessment and consideration of negative factors.

The principle is:

- No operation in an infected area
- No intervention whose predictable complications cannot be mastered (professional competence)

Suggestions for the Evaluation

This includes signs related to an either favorable or adverse treatment result.

This includes e.g. a postoperative infection or delayed wound healing.

The clinical evidence should be provided that the expected therapeutic objective was accomplished (comparison of planning with the achieved result). The analysis of the collected data is used for identifying the therapeutic measures which are most successful for the practitioner ("in my hands").

2.4 Acute Infections

Indication

High urgency (emergency): acting is required on the same day. Since the possibilities of spreading of an acute infection in the maxillofacial region cannot be assessed without precise findings, such a patient has to be examined without delay.

Objectives

- Chronification and prevention of spreading
- Healing of the infection, elimination of the cause
- Restitution of function (mouth opening)
- Pain relief

Risk Factors

- Localization, local anatomy (nerves, vessels)
- Insufficient freedom from pain
- Radiotherapy
- Immunosuppression
- Bisphosphonates/denosumab
- Anticoagulation (in particular also new factor Xa inhibitors)/bleeding diatheses

Guidelines

Active measures include:

- Incision, drainage, root canal treatment, extraction, antibiotics appropriate to risk factors
- Control of the course and the functioning drainage until the acute phase is finished
- Monitoring until the definite rehabilitation is complete

Suggestions for the Evaluation

- Persistent inflammatory exudation, swelling and pain, formation of a fistula
- Disorders of sensibility, restricted function
- If symptoms persist, reevaluation (medical history, findings)

2.5 Tooth Removal (Extraction/Operative Removal)

Indication

Teeth have to be removed if they cannot be restored using periodontal, conservative, endodontic, surgical, orthodontic, or prosthodontic means.

The removal of teeth can be indicated for dental, medical, or social reasons.

The removal of a tooth on the insistence of the patient in the absence of an indication is inadmissible.

Objectives

- Complete removal of the tooth
- Bony regeneration of the defect
- Elimination of the accompanying pathology corresponding to the preceded indication and diagnosis

Risk Factors

- Local anatomy (nerves, vessels, maxillary sinus, maxillary tuber etc.)
- Restriction of mouth opening
- Unclear radiographic findings (hemangioma)
- Location of the tooth and type of retention
- Infected area
- Anticoagulation (in particular also new factor Xa inhibitors)/bleeding diatheses
- Ankylosis
- Radiotherapy
- Immunosuppression
- Bisphosphonates/denosumab

Guidelines

In an infected area, an accompanying antibiotic therapy is to be considered.

Follow-up checks appropriate to circumstances and underlying pathology

Suggestions for the Evaluation

- Leaving of a fragment
- Wound-healing disorder
- Neural disorder
- Pain
- Defects
- Swelling
- Restricted function
- Oroantral connection

2.6 Apicoectomy/ Apical Surgery

Indications

- After unsuccessful endodontic treatment
- Pathology in the apical area

Objective

- Preservation of the functioning tooth

Risk Factors

- Local anatomy (nerves, vessels)
- Neighboring teeth
- Periodontal infection
- Longitudinal fracture
- Radicular topography
- Untreated marginal periodontitis
- Radiotherapy
- Immunosuppression
- Bisphosphonates/denosumab
- Anticoagulation (in particular also new factor Xa inhibitors)/bleeding diatheses

Guidelines

Bacteria-tight obturation of the root canals concomitant with the elimination of the apical pathology; clinical and radiographic monitoring of the state of healing

Suggestions for the Evaluation

- Function/preservation of the tooth
- Formation of a fistula
- Radiographically missing apical healing after more than twelve months
- Clinical symptoms (pain, swelling, percussion, tenderness on palpation)

2.7 Cyst Surgery (Jaw Cysts)

Small jaw cysts

Indication

Owing to the progressive growth and the risk of infection, a cystic (cystoid) lesion has to be treated surgically and examined histopathologically.

As an alternative in the case of small apical osteolyses (DD: radicular cysts), a conservative root canal treatment followed by an observation of the success can be considered.

Objectives

- Removal of the cyst lining and bony regeneration
- Reduction of the cyst preserving neighboring structures (follicular cyst in the mixed dentition)
- Histological diagnosis

Risk Factors

- Local anatomy (nerves, vessels)
- Defect
- Neighboring teeth (devitalization)
- Fracture risk in the edentulous mandible
- Recurrence
- Anticoagulation (in particular also new factor Xa inhibitors)/bleeding diatheses

Guidelines

Cystectomy including treatment of cause (resection or extraction) and histopathologic examination

Monitoring of the complete healing depending on the histological diagnosis (keratocyst)

In case of suspected odontogenic tumors, of major osteolytic-cystic processes, or of unclear cystic findings, referral to a specialist or a clinic is indicated.

Suggestions for the Evaluation

- Infection, formation of a fistula
- Recurrence
- Radiographically missing bony healing after more than twelve months

2.8 Dental Trauma

(Except crown fracture)

Indication

The acute trauma is assessed immediately and urgent measures have to be taken (hemostasis, foreign bodies, and respiratory tract).

In the case of bone fractures in dentate individuals, one always deals with open fractures.

Objectives

- Restitution of form and function
- Preservation of teeth

Risk Factors

- Dirtying/contamination
- Laceration of soft tissues
- Tetanus
- Occlusion
- Tooth loss
- Periodontal defects
- Loss of vitality
- Defects (bone/soft tissues)
- Scars
- Tooth germs
- Traumatic brain injury (Commotio, Contusio, amnesia)
- Radiotherapy
- Immunosuppression
- Bisphosphonates/denosumab
- Anticoagulation (in particular also new factor Xa inhibitors)/bleeding diatheses

Guidelines

- Verification of cause and causality
- Photographic documentation/control of occlusion
- Reposition and fixation of bones and teeth
- Bone fractures necessitate a rigid immobilization.
- Soft tissue treatment
- Check of tetanus prophylaxis
- Radiographic verification of the position of fragments and repositioned teeth
- Control of the stability of splinting, the occlusion, and the course of healing
- Infection prophylaxis (antibiotics, oral hygiene)
- Radiographic follow-up of the teeth after 14 days, of a fracture four weeks after the removal of the splint, long-term controls after three, six, and twelve months (clinically and radiographically)

Suggestions for the Evaluation

- Impaired occlusion
- Pocket formation in the area of traumatized teeth
- Scars
- Permanently altered tooth position
- Unexpected loss of vitality
- Root resorption/ankylosis
- Altered contours
- Disturbed sensibility

2.9 Plastic Corrections

These include adjustments of the quantity and quality of soft tissues and bone in the oral region.

Indications

- Conditions following trauma, iatrogenic sequelae in cases of disturbed function
- Esthetic corrections
- Defects after soft tissue excision
- Corrections of defects prior to implantation
- Morphologic improvement before the insertion of a dental prosthesis
- Incorporation of a denture
- Prior to fixed prosthodontic provisions

Objectives

- Restitution of form
- Augmentation of tissues (quantity)
- Correction of defects (topography)
- Improvement of quality (scars)
- Change of quality (gingiva)
- Change of esthetics and function

Risk Factors

- Starting situation
- Condition of tissues (scarring, shrinkages etc.)
- Type of inflammation (mucosal condition, periodontal condition)
- Anatomy
- Risks regarding operability
- Habits of the patient
- Psychic instability related to esthetic adjustments
- Radiotherapy
- Immunosuppression
- Bisphosphonates/denosumab
- Anticoagulation (in particular also new factor Xa inhibitors)/bleeding diatheses

Guidelines

In principle, the recommendations according to the guidelines for dentoalveolar surgery apply.

The surgical measures are selected in due consideration of the purpose, the prognosis, and the personal resilience of the patient.

Suggestions for the Evaluation

- Recurrences
- Necroses
- Dehiscence
- Bone sequesters
- Discrepancy between the objective and the outcome
- Uncommon discomfort

3. Evaluation Criteria Related to Oral Implantology

Introduction

Based on the biological concept of osseointegration, oral implantology has evolved into an important part of modern dentistry. Today, it has to be taken into account when planning treatments for the oral rehabilitation of edentulous and partially anodont patients. At that, the therapy is subdivided into a surgical and a prosthetic part. For this reason oral- and periodontal-surgical principles have to be considered in the surgical part, while in the prosthetic part the rules of hybrid and crowns/bridges prosthodontics are applied. It is advisable to take into account the SAC Classification of Implant Dentistry from Dawson & Chen (2009) and to draw a distinction between simple, advanced, and complex cases.

Following the approach of the group Oral Surgery/Stomatology, guidelines are presented below which should serve the quality assurance in the area of oral implantology. These were tailored to guidelines for quality assurance which in 1996/97 have been worked out by the specialist committee of the Swiss Association of Oral Implantology (SGI).

Indications

- Support of removable or fixed dentures in the jaw bone
- Abutment for temporary orthodontic force application

Objectives

- Integration into bone and soft tissues (osseointegration) of one or more implants without damage to neighboring anatomical structures with the aim of:
  - Restoring/improving masticatory function
  - Restoring/improving esthetics
  - Restoring/improving phonetics
- Preservation of natural dental hard tissues
- Prevention of risky fixed dentures (wide-span bridges, bridges with extensions)
- Resorption prophylaxis of the alveolar process
- Simplification of orthodontic treatment

Risk Factors

General risk factors have to be considered by the clinician. The patient has to be adequately informed about these. Regarding the local aspects, a stomatognathic system lacking infectious diseases and exhibiting healthy bone, as well as missing general and specific contraindications at the place of implantation are considered basic prerequisites for an implantation.

General serious risk factors
(= unconditional contraindications)

- Severe diseases of the bone, the metabolism, the blood coagulation, the circulation, the heart, and the immune system etc.
- Immunosuppression
- Alcohol and drug abuse
- Bisphosphonates i.v.

General risk factors
(= conditional contraindications)

- Radiotherapy
- Severe diabetes, especially juvenile diabetes
- Nicotine abuse
- Anticoagulation (in particular also new factor Xa inhibitors)/bleeding diatheses
- Cardiovascular diseases
- Renal diseases etc.

Oral risk factors
(= conditional contraindications)
- Untreated periodontitis
- Root residual at the place of implantation (maybe immediate implant following extraction)
- Local infection
- Erosive or bullous diseases of the mucosa on the alveolar process
- Bruxism
- Marked atrophy
- Restricted mouth opening

Guidelines

Surgical infrastructure
- Same requirements as defined by the oral surgery group

Selection of the implant system
- Implant system with quality control (SQS certification)
- Implant system characterized by good long-term documentation
- Implantable materials have to be recorded in a batch-/lot-specific manner (Swiss regulation on medical devices; Medizinalprodukteverordnung).

Planning/collaboration in the team
- Planning records comprising clinical and radiographic findings
- Adequate radiographic evaluation (possibly including template)
- In the teamwork, the prosthodontic planning has to take place before the implantation and in complex cases it is correspondingly elaborate.
- The necessary aftercare has to be ensured by mutual agreement.

Patient information
- Information about operation and treatment risks (risk/benefit ratio)
- Clarification in the case of a failure (including periimplantitis)
- Information about alternative solutions
- Orientation about costs

Documentation
- The details regarding indication, treatment planning, agreements, and patient information, as well as regarding the surgical and prosthodontic procedures have to be written down in the patient chart.
- The clinical condition before the implantation should be documented (photograph or models).
- The postoperative position of the implant should be documented using an X-ray.

Surgical intervention
- Tissue-sparing treatment of soft tissues and bone
- Implantation with primary stability
- Responsibility of the operating surgeon for an implant position conforming to the planning

Prosthodontic treatment
- Preferably the prosthodontic treatment is carried out by the dentist who has planned the reconstruction.
- In the case of implant prosthodontics, particular attention should be paid to a passive accuracy of fit.

Aftercare/recall
- A professional individual aftercare and follow-up have to be ensured.
- The recall interval should be adapted to the individual situation.
- Minimum: yearly clinical check-up and radiographic implant control after one, three, five, and ten years
- In case of pathologic, clinical or radiographic findings, follow-up checks at shorter intervals as a rule are necessary.

Suggestions for the Evaluation

- Course of wound healing
- Condition of soft tissue, implant stability, and X-ray findings after completion of the healing phase
- Clinical and radiographic evaluation of the implant in the functional phase:
  - Subjective complaints/pain
  - Implant stability or implant mobility
  - Local inflammation, pocket formation, periimplantitis
  - Stable bony conditions in the area of the alveolar ridge or bone loss

Responsibilities in Case of a Failure

- Early failure (healing phase): surgery
- Late failure (functional phase): surgery/prosthodontics
- Material deficiency/construction flaws of the system: manufacturer
- Technical flaws of the superstructure: dental laboratory
- Failure to comply with directives regarding hygiene and recall: patient
- In the case of an early failure, it is recommended to be generally accommodating with the professional service invoice.

4. Evaluation Criteria for the Approach to Pathologic Conditions in the Oral Cavity (Stomatology/Oral Medicine)

4.1 Diagnostics in Pathologic Conditions

Indications

Upon every annual recall, the entire oral cavity has to be inspected and the findings have to be documented.
- Deviations in shape, structure, and color of the oral mucosa
- Pain
- Functional disorders
- Prophylactic examination in risk groups (age, habits, medication, and medical history)

Objectives

In due consideration of the medical history:
- Identification of risk behavior regarding malignity (smoking, alcohol)
- Identification of side effects of drugs
- Early detection of precanceroses or malignancies
- Patient information, elucidation
- Instigation of further diagnostic measures without delay

Aggravating Factors

- Previous examinations without a diagnosis
- Misunderstandings, misinterpretations by the patient
- Cancerophobia
- Language barriers
- Regarding interventional diagnostics cf. also "Aggravating factors regarding the collection of findings".

Guidelines

- Smear tests for microbiology (thrush)
- Biopsy in cases of unclear, harmless alterations (histology, immunohistology)
- Tissue sample (biopsy) is the gold standard; cytopathology (brush biopsy) is the adjuvant method (beware of false negative findings).
- Thought pattern: verification of the diagnosis by means of a follow-up, reevaluation in case of deviations, council with specialists, interdisciplinary evaluation

The observation period in unclear cases should not exceed one week until further diagnostic steps are undertaken or initiated.

In case of even the least suspicion of malignancy, no biopsy, but immediate referral to a specialist or clinic should be undertaken.

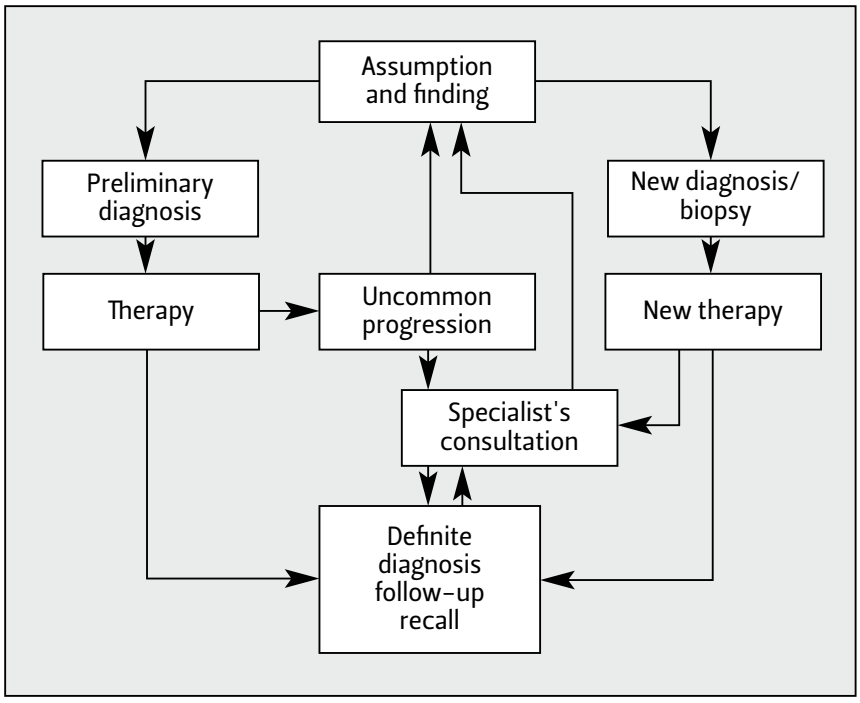
If no diagnosis can be made, immediate referral to a specialist or clinic should be undertaken.

Diagnosis Schema

See figure below.

Suggestions for the Evaluation

- Missing representativity of the biopsy
- Quality of the histopathologic evaluation
- Adherence to the diagnosis schema
- Existing unclear diagnosis
- Delayed instigation of a safe diagnosis



4.2 Therapy of Pathologic Conditions

Indications

- Pain
- Alterations in color
- Functional disorders (swallowing)
- Alterations in the surface characteristics (ulcer, atrophy)
- Other alterations (blisters, desquamation)
- Swellings

Objectives

- Healing
- Diminution of the symptoms
- Clarification on risk behavior
- Observation for a timely recognition of hazardous alterations

Risk Factors

- In general point 2.2 applies
- Irregular recall system
- Localization of the alteration (floor of the mouth, excretory ducts, nerves, vessels)
- Involvement of the gingiva/periodontium
- Atypical patterns of progression

Guidelines

- Causal therapy, medicinal, surgical
- Symptomatical therapy, medicinal, protective plates
- Clarification on risk behavior
- Diagnosis *ex juvantibus* with fixing a time limit
- Organize monitoring

Suggestions for the Evaluation

- Progression does not correspond to expectations
- Regulated recall appointments
- Adherence to the designated procedure
- Comparison of treatment goal and treatment outcome

5. References

Ayer G: Qualitätssicherung in der Chirurgie. Bericht vom Kongress der Schweizerischen Gesellschaft für Chirurgie 1997. Die Union 3: 9 (1997).

Advisory Board in General Dental Practice, Faculty of Dental Surgery, Royal College of Surgeons of England. Clinical Standards in General Dental Practice. Heanor Gate Printing Ltd, Derby (1991).

American Association of Oral and Maxillofacial Surgeons. Parameters of Care for Oral and Maxillofacial Surgery. J Oral Maxillofac Surg 53, suppl. 5 (1995).

Burke F J T, Wilson N H F: Who needs clinical audit? Int Dental J 44: 495–500 (1994).

Cluzeau F, Littlejohns P, Grimshaw J, Hopkins A: Appraising clinical guidelines and the development of criteria – a pilot study. J Interprof Care: 9: 227–235 (1995).

Dawson A, Chen S, Buser D, Cordaro L, Martin W, Belser U: The SAC Classification in Implant Dentistry – Straightforward – Advanced – Complex. Quintessenz, Berlin (2009).

Eccles M, Clapp Z, Grimshaw J, Adams P C, Higgins B, Purves I, Russell I: Developing valid guidelines: methodological and procedural issue from the North of England Evidence Based Guidelines Development Project. Qual Health Care 5: 44–50 (1996).

Froehlich F, Universitäts-Poliklinik Lausanne: Qualitätssicherung in der Medizin am Beispiel der Gastroenterologie. Vortrag "Workshop Qualitätsförderung im Spital", Ittingen (1998).

Gebert A J: Konzeptuelle Ansätze in der Qualitätsbeurteilung, Qualitätsförderung und Qualitätssicherung. Swiss Surg 1: 8–14 (1995).

Gutzwiller F: Qualitätsförderung im schweizerischen Gesundheitswesen. In: Adler H, Chrzanowski R, Kocher G (Hrsg). Qualitätssicherung im Gesundheitswesen. Schriftenreihe der SGGO 29: 7–23 (1993).

Halbritter S A, Spieler P, Bornstein M M: Risikoläsionen der Mundhöhlenschleimhaut. Diagnostik, Therapie und Nachsorge anhand zweier Fallberichte. Schweiz Monatsschr Zahnmed 117: 730–745 (2007).

Kübler A, Mülling J: Leitlinien für die Mund-, Kiefer- und Gesichtschirurgie. Springer, Berlin (1998).

Kunkel M, Wagner W: Operative Entfernung von Weisheitszähnen. Leitlinien der Deutschen Gesellschaft für Zahn-, Mund- und Kieferheilkunde (DGZMK) 2012

McGeorge A: The Use of Medical Audit for Producing Guidlines of Medical Practice. Swiss Surg 1: 29–34 (1995).

Pfisterer M: Praxisrichtlinien für die Schweiz – Was bedeuten sie in der Praxis? Schweiz Med Wochenschr 127: 1177–1178 (1997).

Sailer H F, Pajarola G F: Orale Chirurgie. Farbatlanten der Zahnmedizin, Bd. 11. Thieme, Stuttgart, S. 2–22 (1996).

Wieland Th: Iatrogene Komplikationen und Qualitätsverbesserung im medizinischen Alltag. Schweiz Med Wochenschr 126: 517–521 (1996).

6. Authors of the Guidelines Oral Surgery/Implantology/ Stomatology

Marc Baumann, Zurich
Hermann Berthold, Bern
Daniel Buser, Bern
Karl Dula, Thun
Andrea Glocker, Zurich
Nicolas Hardt, Lucerne
J. Thomas Lambrecht, Basel
Gion F. Pajarola, Zurich
Hermann F. Sailer, Zurich
Harald Schiel, Basel
Philipp Tachezy, St-Gall

Revision of December 24, 2013
Michael M. Bornstein, Bern
Vivianne Chappuis, Bern
Andreas Filippi, Basel
Sebastian Kühl, Basel