The Foundation of Knowledge

8th Consensus Document on Indications and Procedures for Corrective Interventions with Corticobasal® Implants (2022)

Executive Summary

This consensus document establishes definitions, principles, indications, and procedural recommendations for corrective surgical and prosthetic interventions involving Corticobasal® implants. Corrective interventions are essential for maintaining long-term stability of the Bone-Implant-Prosthetic System (BIPS) and preventing progression of complications. Interventions must be carried out promptly when indicated and by authorized, experienced practitioners.

Key Consensus Statements:

- Corrective interventions serve to stabilize or re-establish BIPS function; failure to provide them when indicated constitutes malpractice.
- Corrective interventions are divided into prosthetic, surgical, and combined surgical-prosthetic procedures.
- Indications include implant mobility, prosthetic fractures, bone fragmentation, overload osteolysis, and retrograde osteolysis.
- The treating practitioner is primarily responsible for corrective care during the first 24 months post-treatment.
- Corrective interventions must follow biomechanical principles, with emphasis on restoring cortical anchorage and stable prosthetic splinting.

1. Definitions

Consensus statement: A corrective intervention addresses undesired conditions within the BIPS. It may be surgical, prosthetic, or combined. Drug therapy may support these interventions by reducing chewing forces.

- Surgical corrective interventions are required for implant mobility, prosthetic loss of splinting, cortical chipping or fracture, necrosis, or retrograde osteolysis.
- Prosthetic corrective interventions are required for occlusal discrepancies, loss of centric relationships, patient intolerance of prosthetic gaps, or fractures.
- Combined interventions are indicated in overload osteolysis.

2. Treatment Principles and Legal Framework

Consensus statement: Corrective interventions require high expertise and must adhere to legal and ethical obligations.

- Only authorized practitioners may perform corrective interventions, except in emergencies.
- The treating provider should perform all corrective interventions within 24 months of the primary treatment.
- Prognosis must be assessed for the entire BIPS, not just individual implants.
- Corrective actions must be initiated immediately upon indication.

3. Indications for Corrective Interventions

Consensus statement: Corrective interventions are indicated for the following:

- Vertical or lateral mobility of the prosthetic construction.
- Fractures or separations of prosthetic frameworks.
- Loss of implant stability requiring removal and replacement.
- Cortical fragmentation or necrosis impeding implant stability.
- Retrograde or overload osteolysis threatening systemic BIPS stability.

4. Prosthetic Corrective Interventions

Consensus statement: Prosthetic adjustments may be required during the resting phase (12–24 months post-treatment) without removing the prosthesis.

- Corrections may include increasing vertical dimension, re-establishing centric occlusion, and incorporating over-bridges.
- Palatal gingival epitheses may be used temporarily for esthetics and hygiene.
- Fixed over-bridges must be used if occlusal or positional corrections are required; simple separations are malpractice.

5. Simple Corrective Surgical Interventions

Consensus statement: Single implants can be removed without prosthesis removal when indicated.

- Indications include necrosis, cortical chipping, or loss of bone contact.
- Replacement is not always required if the prosthesis remains stable, but strategic implant sites should be preserved.

6. Complex Corrective Surgical Interventions

Consensus statement: Removal of prosthetic constructions and multiple implants may be necessary when instability is widespread.

- The objective is to re-establish a stable BIPS with immediate loading.
- New implants must achieve cortical anchorage and be prosthetically splinted.

7. Multi-Stage Corrective Interventions

Consensus statement: Multi-stage approaches may be required when immediate full restoration is not feasible.

- **Type A**: Multi-stage with permanent implant incorporation—initial implants are placed with expectation that some will be replaced in a second surgery.
- **Type B**: Multi-stage with temporary support—initial implants provide temporary fixed prosthetics until sufficient healing allows final reconstruction.

8. Recommendations for Corrective Interventions

Consensus statement: Region-specific recommendations ensure safe outcomes.

- **Mandible**: New implants should exceed the number of removed implants; caudal anchorage preferred. Loosened implants should generally be removed.
- **Maxilla**: Loosened tuberopterygoid screws should be removed before corrective surgery; reinsertion should avoid prior sockets. Alternatives include distal implants of larger diameter.
- **Segmental Constructions**: All implants in unstable segments are typically replaced, as cross-arch stabilization is limited.

9. Summary of Consensus

- Corrective interventions are an integral part of Corticobasal® implantology and must be performed without delay when indicated.
- Authorized, trained practitioners must perform these interventions, particularly within the first 24 months.
- Multi-stage strategies may be necessary in complex cases.
- The guiding principle is restoration of cortical anchorage and immediate prosthetic stability.

Overall consensus: Corrective interventions with Corticobasal® implants must follow biomechanical, surgical, and prosthetic principles to ensure long-term stability and patient safety.

Approved by the expert consensus group, Version 2, April 2022.