Key: Determine marginal (crestal) bone loss for initial wound healing which may have exposed the threads, but now is stable and not a disease.

**Peri-Implant Mucositis** is an inflammatory lesion limited to the surrounding mucosa.

**Local Factors**

- Maintenance – Oral hygiene performance – Microbial profile/surface modifications
- Restricted oral hygiene access
  - Coronal contours (compromised hygiene access)
  - Embrasure morphology
  - Ridge contact
  - Misfit
- Oral imbalance (xerostomia)
- Free gingival margin instability
  - Inadequate keratinized tissue
  - Freely movable tissue (i.e., frenum pull)
  - Phenotype
- Screw loosening (microleakage relative to interface position)
- Smoking – Altered pathogen burden
- Foreign materials (e.g., food, cement)
- Exposed implant surface micro- and macrotopography leading to altered inflammatory burden

**Peri-Implantitis** is an inflammatory lesion of the mucosa that affects the supporting bone with loss of osseointegration.

**Systemic Shared Risk Factors**

- Smoking – Compromised immune system
- Periodontitis (moderate to severe) – Relative to pathogen burden and inflammatory biomarkers
- Aggressive periodontitis – Relative to inflammatory biomarkers
  - Genetics – No prognostic value for genetic testing (except ILB)
- Diabetes – Hyperglycemia
- Rheumatoid arthritis
- Irradiated head and neck cancer
- Provoked foreign body reaction – Biocompatibility

Note: May not see cardinal signs of inflammation, but bone loss continues

**Local Shared Risk Factors**

- Implant Surface Characteristics – Three types of surface roughness (Sa)
  1. Minimally Rough (Sa) = 0.5 microns (machined, smooth, or turned)
  2. Moderately Rough (Sa) = 1 to 2 microns (i.e., Osseotite, Biomet 3i; SLA, Straumann; TiUnite, Nobel Biocare; TiOblast, Astra Tech)
  3. Rough (Sa) > 2 microns (e.g., plasma-sprayed and HA-coated implants)

Note: Increased risk has been reported in HA-coated surfaces – may be more related to surface characteristics than to relative roughness.

*Data indicates prevalence of peri-implant mucositis was found in 50% of the implants.*

*Prevalence of peri-implantitis was found in 12% of the sites.*

*Note: Not clear on whether peri-implant mucositis will progress to peri-implantitis!*

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