Periodontology 14 / part 2 - Rand Herzallah

Slide 10: as you can see these pictures demonstrate probing around teeth and around implants, when tissues are healthy you'll actually not get a difference between probing depth around teeth or implants but if there was an inflammation around implants the probe will go down all the way to the bone.

Around teeth the probe can never reach the bone.

Slide 11: Due to the lack of the vascular plexus of the periodontal ligament, the implant blood supply comes from two sources: the peri-implant mucosa and the supraperiosteal blood vessels (bone).

Slide 12: The picture on the left: this is where normal teeth get their blood supply from; they get it from supraperiosteal fibers that come from the gingiva, from the bone and periodontal ligament vascular plexus. They anastomose together to give a rich blood supply.

In implants there are only two sources: the peri-implant mucosa and the supraperiosteal blood vessels. Low vascularity means low immunity (immune cells) so the response to infections will be a bit exaggerated.

Slide 13: The potential for repair is limited due to the: A. Lack of periodontal ligament B. Reduction of the cellular components of the mucosa (fibroblasts) C. Reduced vascularization.

Slide 14: this picture is taken after removing the crown just to see how soft tissues look like around implants.

Slide 15: Early complications:

osseointegration depends on:

1. Quality and quantity of bone.
2. Intra-operative factors like receptors, heating of the bone,…etc
3. Patient related factors like smoking, diabetes, immunocompromised,…etc
4. Implant related factors like the length, width and surface of implants

Any problem in one of these factors will cause failure.

Slide 16:

Late complications:

Primary failure means not getting an osseointegration, they are:

1. Post operative infections (infected recipient site)
2. Overdrilling site
3. Fibrointegration

Secondary failures:

1. Peri-implantitis
2. Mechanical overload

Aesthetic failures also one of the late complications

Success Rate: like when no fracture happened to the crown, no loosening of the implant,…., no complications.

Survival rate: means integration.

Success Rate is what really concern patients.

Slide 17: Involve pathology of the surrounding peri-implant hard and soft tissues. Frequently, soft-tissue problems are an inflammatory response to bacterial accumulation. The cause of bacterial accumulation around implants is key to understanding the problem.

The cause of bacterial accumulation is actually the implant itself, it expose the peri-implant tissues to the outside oral environment. So if we remove the implant there will be no bacterial accumulation and healing will take place.