Results: A higher prevalence and extension of the inflammatory infiltrate, and microvessel density values were found around the titanium specimens. A higher intensity of NOS1, NOS3 and VEGF was found mostly in the titanium samples, while a lower intensity of NOS1, NOS3 and VEGF was mostly found in the zirconium oxide specimens.

Conclusions: The tissues around the titanium healing caps seemed to undergo a higher rate of reparative processes, most probably correlated with the higher inflammation processes observed in these tissues. A higher expression of the intensity of NOS1 and NOS3 could be, on the other hand, correlated with the higher amount of bacteria reported around the titanium samples.

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Reliability of spiral tomography on the alveolar crest in implant dentistry

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Purpose: Assessment of the bone site should be routinely performed by radiologic diagnostics. To gain information about ridge width and height, conventional tomography was applied as the preimplantologic diagnostics in the last few years. To assess bone volume via tomograms, detection of the alveolar crest is important. This study is aimed to evaluate the reliability of measurements in spiral tomography through assessing the visibility of the alveolar crest and the measurements between the alveolar crest and other anatomic structures.

Materials and methods: 110 spiral tomograms of the jaws were taken by Scanora x-ray unit from the patients. The visibility of the alveolar crests was estimated by 3 observers and classified as clearly visible, questionable visibility, or not visible. 3 observers measured the distance between the alveolar crest and the reference points of anatomic structures. The measurements were repeated 2 weeks later.

Results: 52.9% of alveolar crests on upper jaws and 61.5% of alveolar crests on lower jaws were visible. The interobserver and intraobserver agreements on the visibility were low. The mean ranges of the measurements were 1.39 mm (SD = 1.37 mm) on maxilla and 1.03 mm (SD = 1.01 mm) on mandible in the interobserver evaluation. The interobserver variance was greater than the intraobserver variance in the measurements of distance.

Conclusion: Spiral tomography showed a relatively low reliability in the visibility and measurements of the alveolar crest even though might has given additional information about the bone width and the relation to anatomic structures such as alveolar canal or sinus floor.

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Early ITI implant failures. Results from a 10-year experience in private practice

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Introduction: The predictability of dental implants has been extensively documented; however, the topic of early failure has rarely been addressed, especially in private practice. This clinical study documents the occurrence of early failures recorded over a 10-year period with 2021 ITI implants in private practice.

Material and methods: Between January 1995 and 2005, 874 patients (37.7% males, 62.3% females) were treated with 2021 ITI implants. The mandible/maxilla distribution was 1048/973, 55.6% were < 11 mm, and 77.7% were Ø4.1 mm; 370 (18.3%) were placed in type IV bone. Smokers, medically compromised patients and bruxers received respectively 20.8%, 17.1%, and 20.3% of implants. 6.8% (137) were involded in an immediate loading protocol. Early failure was defined as a failure occurring before insertion of the final prosthesis.

Results: 18 (0.9%) implants were identified as early failures. Average patient age was 62.4 years, average time in situ was 1.9 months, 45.4% of failed implants were < 11 mm and 44.4% were placed in type IV bone. Of these failures, 33.3% were placed in smokers, 72.2% in bruxing patients, 33.3% in medically compromised patients and 55.5% were located under transitory removable prosthesis. One failed implant was immediately loaded and 3 implants were removed because of sensitive disorders.

Discussion & Conclusion: The occurrence of early failures for ITI implants was low (0.9%) as previously reported. However, several risk factors could be identified. They were: bruxism, medically compromised patients, provisional removable prosthesis, type IV bone and smoking.

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Systematic review of survival and complications of implant supported FPDs

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Objectives of this systematic review was to assess the 5 and 10-year survival of implant supported and combined tooth-implant supported FPDs and the incidence of biological and technical complications.

Methods: Medline search supplemented by manual searching was conducted to identify prospective and retrospective cohort studies on FPDs with a mean follow-up time of at least 5 years. Patients had to have been examined clinically at the follow-up