

Prospective clinical evaluation of 201 direct laser metal forming implants: results from a 1-year multicenter study

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Received: 27 October 2010 / Accepted: 22 February 2011
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Abstract This prospective clinical study evaluated the survival rate and the implant-crown success of 201 direct laser metal forming (DLMF) implants in different clinical applications, after short-term follow-up of functional loading. At the 1-year scheduled follow-up examination, several clinical, radiographic, and prosthetic parameters were assessed. Success criteria included absence of pain, sensitivity, suppuration, exudation; absence of implant mobility; absence of continuous peri-implant radiolucency, DIB <1.5 mm; absence of prosthetic complications at the implant-abutment interface. A total of 201 implants (106 maxilla, 95 mandible) were inserted in 62 patients (39 males, 23 females; aged between 26 and 65 years) in eight

different clinical centers. The sites included anterior ($n=79$) and posterior ($n=122$) implants. The overall implant survival rate was 99.5%, with one implant loss (maxilla: 99.0%, 1 implant failure; mandible: 100.0%, no implant failures). The mean DIB was 0.4 ± 0.2 mm. Among the survived implants (200), five did not fulfill the success criteria, giving an implant-crown success of 97.5%. This 1-year follow-up prospective clinical study gives evidence of very high survival (99.5%) and success (97.5%) rates using DLMF implants.

Keywords Dental implants · Porous titanium implants · Bone ingrowth · Direct laser metal forming (DLMF)

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