

control the osteotomy.. Drill less implant systems have also come into the picture.

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55. Drilling speed in implantology: what's the deal?

Rupandeep Kaur Samra

Private

Oral rehabilitation with endosseous implants represents a safe and viable treatment option with high success rates; however, it depends on osseointegration. There are many parameters that must be taken into account during implant site preparation which should be as atraumatic as possible, for osseointegration to occur. Excessively traumatic surgery can adversely affect the maturation of bone tissue at the bone/implant interface and consequently diminish the predictability of osseointegration so the mechanical and thermal damage should be minimized during surgical procedure. The viability of the bone tissue depends on several factors: rotational speed; irrigation type of osteotomy (continuous or intermittent); temperature; pressure applied during drilling; shape, size and cutting edge of the drills; duration of bone heating and density of the bone.. Implantology and its surgical techniques are in constant evolution. Most implant systems recommend similar drilling protocols (from 800 to 1500 rpm), using profuse irrigation in order to avoid overheating generated by the drill. Recently there has been suggested a new concept of low speed drilling (50 rpm) without irrigation as an alternative to the conventional procedure with irrigation. This technique can provide some advantages including collecting autologous bone without the need for additional surgery. It is possible to recover directly the bone cut by the drills without contamination by saliva, which can be used for an autograft. Drilling at low speed it is possible to better