Early Loading of Variobase Abutment Restored Hydrophilic Implants in Single Edentulous Posterior Regions

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Background

Improved surface chemistry can efficiently optimized osseointegration of dental implants, aiming in shorten healing period before loading. The chemically active, hydrophilic surface promotes the initial healing reaction, allowing for direct cell interaction at the initial stage of the osseointegration process. Bone formation is immediately initiated resulting in earlier secondary stability, therefore reducing the critical dip. Enhance of osseointegration implies greater security and higher predictability in early treatment.

Aim

To evaluate early clinical outcome of Variobase abutment restored hydrophilic implants in single posterior edentulous cases.

Methods and Materials

Thirty-eight single edentulous posterior sites were chosen to restored with Strauman SLAactive implants in 38 patients. Implant stability quotient (ISQ) was measured six weeks after surgery and permanent restorations were established eight weeks after insertion, with integrated abutment crowns (IACs) manufactured from Variobase abutments. Regularly follow-up was made, a periapical X-ray was taken at each follow-up time.

Fig.1 x-ray after insertion

Fig.2 x-ray after 6 weeks

Fig.3 IACs manufactured from Variobase

Fig.4 Final restoration

Results

All thirty-eight SLAactive implants achieved predictable stability in six weeks. ISQ in vertical direction is 80.8±3.9, and 79.7±4.1 in horizontal direction. X-ray showed no bone malformation or absorption around implants and no excess cement at the edge of crown, indicating satisfying bone integration. The restorations’ success rate after eight weeks load is 100%, no implants failed after one year of follow-up.

Table-1 General info			
Total (person)	35	Implant	38
Male	20	Maxilla	18
Female	18	Mandible	20
average age (yrs)	38		

table-2 ISQ examination after 6 weeks		
	Buccle	Lingual
Max	86	86
Min	67	67
Mean	79.7	80.8
Sd	4.1	3.9

Conclusions

With our limitation, permanent IACs restoration manufactured from Variobase abutment is safe to restore hydrophilic implant at six weeks after insertion ,long-term effect remains to be observed. Variobase abutment is a strong foundation for treatment flexibility and allows technicians to remove excess cement and visually inspect the cement margin. Delivering a one-piece restoration may save chair time.

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