Abstract # P0405

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Healing of furcation defects following treatment with PRG or GTR
A preliminary study

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Aim of the study

To evaluate clinically the results following treatment of mandibular grade II furcation defects with either platelet-rich gel (PRG) or a collagen membrane (GTR).

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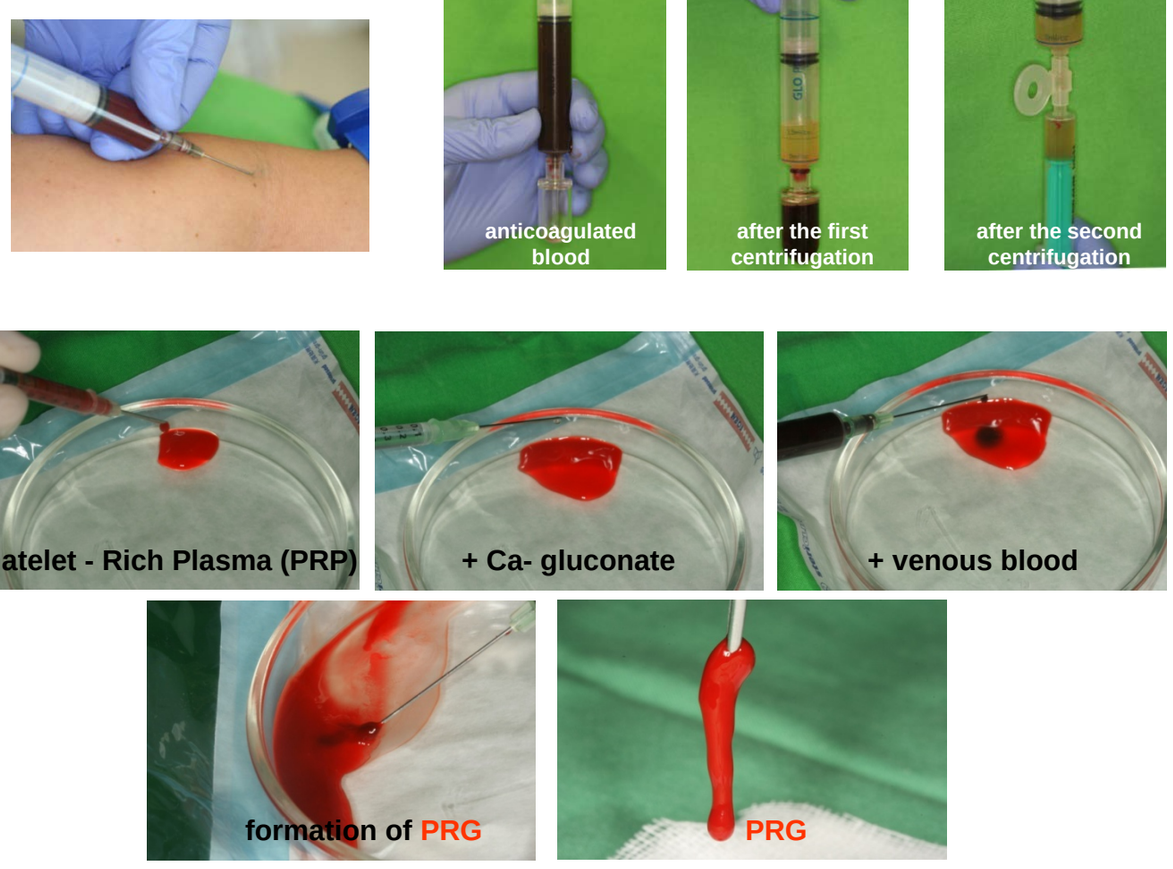

Fig 1. Platelet-Rich Gel preparation

Materials and methods

Sixteen patients (8/8) with advanced periodontal disease, each of whom displayed one mandibular furcation defect grade II, were randomly treated with PRG (test) or GTR (control). Clinical evaluation was performed at baseline and at six months. Main clinical parameter was the horizontal 'bone sounding' (HBS). Surgery consisted from full flap preparation, curettage of the defect, scaling, root planing, preparation of the PRP before, and PRG during surgery (test). Application of the PRG in furcation defects in the test group, or placement of the collagen membrane *(Bio-Gide Perio, Geistlich, Switzerland)* over lesion (control).Pre-and postoperative use of chlorhexidine 0.2%, antibiotics per os.

PRP and PRG preparation

To produce PRP extracts, 8.5 ml of anticoagulated (ACD-A) autogenous venous blood was centrifugated in a GLO GT416 centrifuge *(Glotech Co., Ltd., Korea)* for 5 minutes at 1200g Soft Start. To compress the platelets into a single pellet, a second centrifugation step was performed for 10 minutes at 1200g Soft Start. At the end of the PRP preparation 1 ml of PRP was taken from the GLO PRP syringe *(GLO PRP kit, Glotech Co.).*

To prepare PRG, 0.2 ml Ca-gluconate and 0.4 ml autogenous venous blood was added to 1ml PRP. After 10 minutes PRG was formed.

Results

		PRG test	GTR control	p value
PPD	**Preop**	5.63 ± 1,19	6.25 ± 1,49	n. s.
	6 month	3.13 ± 0,65	4.38 ± 1,19	**s.**
	p value	s.	s.	
GR	**Preop**	1.25 ± 0,71	2.25 ± 1,04	n. s.
	6 month	1.38 ± 0,74	2.63 ± 0,74	s.
	p value	n.s	n.s.	
CAL	**Preop**	6.88 ± 1.25	8.30 ± 1.77	n. s.
	6 month	4.50 ± 1.20	7.00 ± 0.93	**s.**
	p value	s.	n.s	
VBS	**Preop**	5.50 ± 1.69	6.88 ± 0.99	n. s.
	6 month	4.38 ± 0.52	4.88 ± 1.46	n. s.
	p value	s.	s.	
HBS	**Preop**	5.75 ± 1.83	7.00 ± 2.14	n. s.
	6 month	4.75 ± 1.49	5.63 ± 2.39	**n. s.**
	p value	n.s.	n.s.	

Table 1. Periodontal measurements recorded at baseline and at 6 months

Compared to baseline, the improvements of mean HBS values were not statistically significant in both groups. No statistically significant differences were observed between the treatment groups.

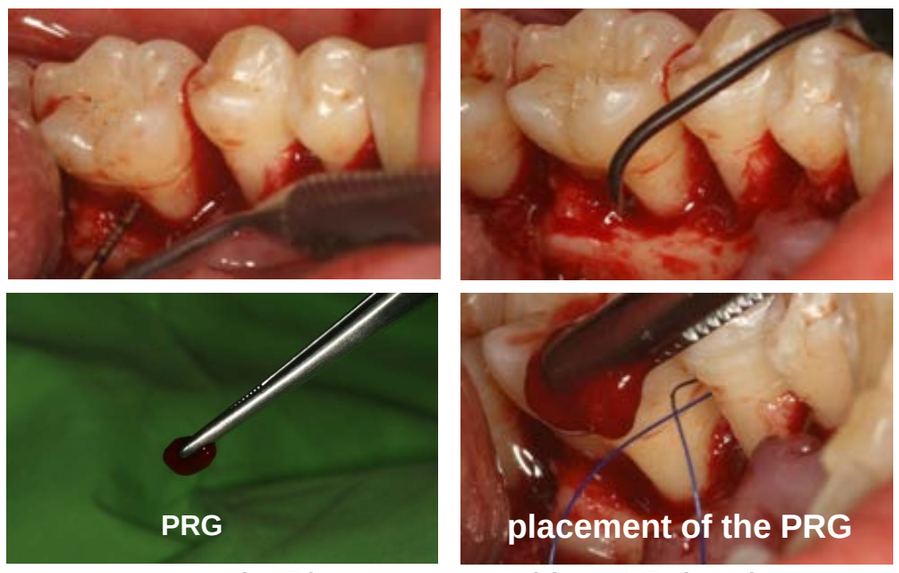

Fig 2/a: .surgery with PRG (test)

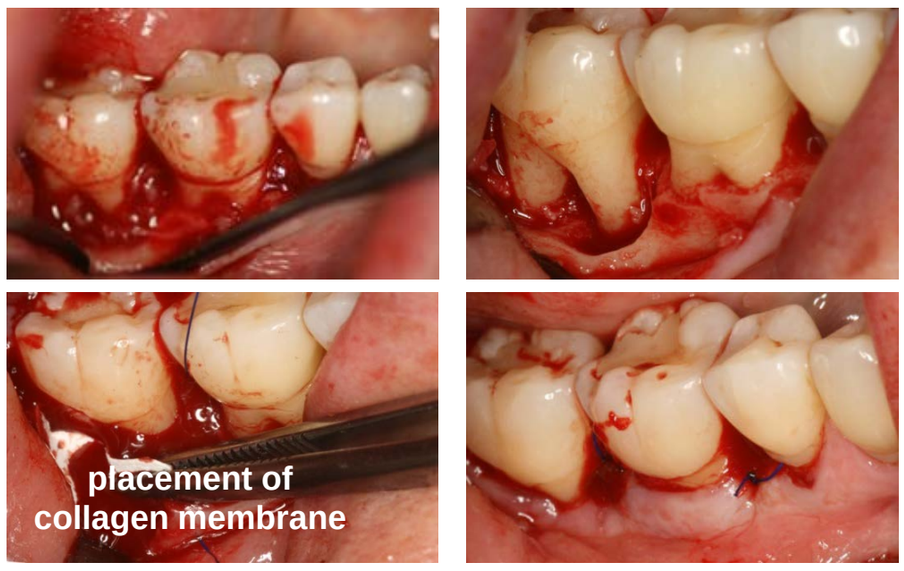

Fig 2/b: surgery with GTR (control)

Conclusions

The present preliminary study has shown that (i) half year after surgery, both treatments resulted in statistically not significant HBS reductions (ii) mean PPD and CAL values measured at defect entrance showed significant improvements in both groups.