昭和63年12月23日学術刊行物認可1434号

ISSN 0914-6695



Japanese Society of Oral Implantology

13(Fri.) - 15(Sun.)September 2013

Fukuoka International **Congress Center** Fukuoka Sunpalace Hotel & Hall

会 슾

Ŧ

日口腔インプラント誌 J.Jpn.Soc.Oral Implant.

http://www.shika-implant.org/



Journal of Japanese Society of Oral Implantology

第43回 公益社団法人 日本口腔インプラント学会 学術大会

(第31回公益社団法人日本口腔インプラント学会 九州支部総会·学術大会併催)

第26卷 特別号

期:平成25年9月13日(金)-15日(日) 場:福岡国際会議場・福岡サンパレスホテル&ホール 管:公益社団法人日本口腔インプラント学会 九州支部 大 会 長:古谷野 潔 (公益社団法人日本口腔インプラント学会理事・ 九州支部支部長)

vol. 26 Special Issue / 2013.9 公益社団法人 日本口腔インプラント学会

Cumulative interceptive supportive therapy (CIST) システムにてインプラントメンテナンスを行った1症例 **〇渡辺 孝夫^{1,2,3)},渡辺 悦子²⁾,石坂あい子²⁾,浅井 澄人³⁾,清水 治彦²⁾** 神奈川歯科大学人体構造学講座¹⁾, 関東·甲信越支部²⁾, 日本歯科先端技術研究所³⁾

A case report using cumulative interceptive supportive therapy (CIST) to maintain implants O WATANABE T1,2,3), WATANABE E2), ISHIZAKA A2), ASAI S3), SHIMIZU H2) Department of Anatomy, Kanagawa Dental College1), Kanto-Koshinetsu Branch2), Japan Institute for Advanced Dentistry3)



I Purpose: World-wide the average life span is increasing and, equally, implant treatment is being conducted as an alternative apparatus for missing teeth. Implants have been reported to have a high survival rate or success rate. However, the optimum method for ultra-long term maintenance system to keep implants in good condition over 30 years should be discussed.

Life expectancy in each decade

Decade	Male (Years)	Female (Years)				
(Years)	From Year 2011					
20	59.93	66.35				
30	50.28	56.56				
40	40.69	46.84				
50	31.39	37.32				
60	22.70	28.12				
70	14.93	19.31				
80	8.39	11.36				
90	4.14	5.46				



However, pus discharge continued. Under diagnoses as protocol D, antibiotic therapy using azithromycin hydrate and respective surgical therapy were performed.

18 months: protocol B (PPD:3mm, PI:+, BOP:-, BL:2mm)







Complications of Implant and its superstructure in our patients

Peri-implant disease

bone loss

A: Biologic complications/

Peri-implant mucositis: without

Peri-implantitis : including bone loss

Duration: for 15 years from 1983 to 2003

No. of patients: 400 No. of implants: 974 No. of superstructures: 542

No. of complications: 155(28.6%/542)

Type A: Biological c. 111(71.6%) Type B: Mechanical c. 44 (28.4%) Soft tissue complications: without bone loss, Fistula, excessive swelling, hyperplasia, etc The causes by bacteria in conjunction with periodontal disease.



70% of implant complications were Type B; Biological c.

Peri-implant lesions have also been found to be a common clinical entity 9 to 14 years after implant placement. If patients have a history of periodontal disease, they are at higher risk to develop peri-implantitis and to undergo additional treatment.

A maintenance system called cumulative interceptive supportive therapy (CIST) has been proposed by Prof. Lang (2000). In this presentation, a clinical case using CIST system to maintain implants and its clinical usefulness will be reported.



A thirty nine-year old female, 158cm, 46Kg

on April 27, 2009.

Chief complaint; bleeding from upper left lateral incisor



After tooth extraction of No. 21

3 years: Protocol B (PPD:3mm, PI:+, BOP:-, BL:2mm)

The second se			·····································					
A CARD AND AND AND AND AND AND AND AND AND AN	程度 Y IYI/V4/22 動揺 1 2-3 粗造 · ·		菌数 (対数値) Logコピー	菌数 (実数値)	対総菌数比率 %	リスク判定 (唾液のみ)		
	ALL AZZARAZA ALA AZZARA	主な口腔内総細菌	5.4	230,000		安心 少し注意 注意		
	B A 32 32 32 3 4 7 1 1 1 1 1 2 2 2 1	A. actinomycetemcomitans	3.7 未満	5,000 未満	参考值 0.000 %			
	8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8	P. intermedia	3.7 未満	5,000 未満	参考值 0.00 %			
and the second of the second sec		P. gingivalis	3.7 未満	5,000 未満	参考值 0.00 %			
	A 32 32 24 2 24 A A A A A A A A A A A A A A A	T. forsythensis*	3.7 未満	5,000 未満	参考值 0.00 %			
	和造 ダン ダン ダン	T. denticola	3.7 未満	5,000 未満	参考值 0.00 %			
	動揺 2	F. nucleatum						
	程度	则定方法: ★ PCR-Inva	der法 ☆ Dire	ect-Invader法				

Although bone loss remained at No.1, No.2, Inflammation was not observed. Three parameters without BL suggested Protocol B.

Biological examination using PCR-Invader method did not detect 4 bacteria in conjunction with periodontal diseases.

III Discussion:

CIST system states that the detection and treatment of early pathogenic changes during follow-up period could prevent peri-implant soft tissue inflammation and progressive bone loss. The point is a system composed with cumulative treatment and continuous monitoring of peri-implant tissue.

Treatment:

Most basic treatment in

Daily care

Mechanical debridement (ultrasonic, air-abrasive) **Antiseptic treatment** (chemical agents; chlorhexidine),





Clinical examination showed PD (peri-implant) pocket depth) was 5mm and BOP (bleeding on probing) in the deepest site was positive in No. 21 and No. 22.

歯式

PD, BOP and Periotest value at the first visit

Implant placement, Second surgery, Final restoration



Under IV sedation, rough surface titanium implants were placed immediately after the tooth extraction and simultaneous bone augmentation on June 3, 2009.



A second-stage surgery was performed 6 months later and the superstructures were set on December 2009.









our system are the usual methods used in dental clinics.

Low energy Er:YAG laser

photonic devices (laser), photodynamic therapy **Antibiotic treatment: Regenerative or resection surgery Removal of implant**

Schwarz F, et.al. : J Clin Periodontol. 2003 Jan; 30(1): 26-34. "Non-surgical periodontal therapy with both an Er:YAG laser + SRP and an Er:YAG laser alone may lead to significant improvements in all clinical parameters investigated."



Laser Type: Erbium YAG Wavelength: 2.94 microns Pulse Energy: Up to 700 mJ Pulse Rate: Up to 50 Hz Pulse Duration: Hard tissue mode: < 0.6 ms Soft tissue mode: < 1.0 ms Power: Up to 8 Watts on tissue Spot Size Hard tissue mode: 0.6 - 1.0 mm Soft tissue mode: 0.2 - 1.0 mm



Our Modified **CIST** System (to suit our clinic in 2011) We considered our situation concerning Er:YAG laser and modified the

original CIST system to suit our clinic.

Severity	Diagnoses	Parameter				Treatment		
		Plaq ue	Pocket depth	Bleeding	Bone loss	Person in		
Protocol		ΡΙ	PPD	BOP	BL	charge		
Pr.MR	normal	_	<3"			Patient	Maintenance Recall	Daily care
Pr. A	Early mucositis	+	<3"			Hygienist	Mechanical debridement	PMTC (ultrasonic, air- abrasive)
Pr. B	Moderate mucositis	+	4-5 m	+		Hygienist	Antiseptic treatment	chemical agents; chlorhexidine)
						Dentist	Non surgical treatment	Low energy Er:YAG laser
Pr. C	Early implantitis	+	>5"	+	≤2 _{mm}	Dentist	Antibiotic treatment	Local use: mynomicine Systemic use: azythromicine
Pr. D	Moderate implantitis	+	>5 _{mm}	+	>3 _{mm}	Dentist	Surgical treatment	Regenerative or resective surgery in conjunction with high energy ER:YAG laser
Pr. E	Severe implantitis	+	whole	+	whole	Dentist	Removal	

Provisional and final restorations on Feb. 2011

Maintenance and Recall:

Protocol A: Initially after implant treatment, daily care was carried out by patient. SRP and PMTC was performed monthly by dental hygienist since the first recall.

12 months: Protocol D (PPD:5mm, PI:+, BOP:+, BL:2mm)



	, t	51				E.	μ			TT		1.6		
Y	1X	1										XI	Y	
		1	J											
V	BZ/B	72/2	B2/2	2/2	22/2	2/2			2/2	23	22/2	325	XA	\bigvee
A	92	322	2/2 3	2/2	2/2	2/2/2	\square	\land		2	2/2/2	3/23	\wedge	\square
7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
2/2	23/2	32/2	22/2	22/2	NI	NI	22/3		\mathbb{N}	33/3	2/2	32/3	2/2	\bigvee
38	2/20	3/2/2	22	2/22	2/22	2/22	2/2			3/22	722	2/20	922	\square
		j		1	/	j				1~2			2	
3	V 1												V	· ·
	右	F						1	左	下 下		1	11	
									-	- 1				



Pus discharge and slight bone loss was observed in No.22 12 months later. in 2012. Cleaning of pocket using antiseptic liquid (0.2%) chlorhexidine digluconate) was carried out every day at home.



· · · · · · · · · · · · · · · · · · ·										
	菌数 (対数値) Logコピー	菌数 (実数値) コピー	対総菌	勤比率 %	リスク判定 (唾液のみ)					
主な口腔内総細菌	5.8	610,000	_		安心 少し注意 注意					
A. actinomycetemcomitans	3.7 未満	5,000 未満	参考値	0.000 %						
P. intermedia										
☆ P. gingivalis	3.7 未満	5,000 未満	参考值	0.00 %						
☆ T. forsythensis*	4.2	17,000	参考値	2.79 %						
☆ T. denticola	3.9	7,100	参考值	1.16 %						
F. nucleatum					<u> </u>					
測定方法: ★ PCR-Invader法 ☆ Direct-Invader法										

conclusion:

CIST is a system basically using conventional methods, to find the early stages of periodontal disease and to treat them. The important point is, this system should be managed in cooperation with patients, hygienists and dentists...