

# Oral management of intraoral bleeding and postoperative infection of cystectomy in a case with a Hemophilia A

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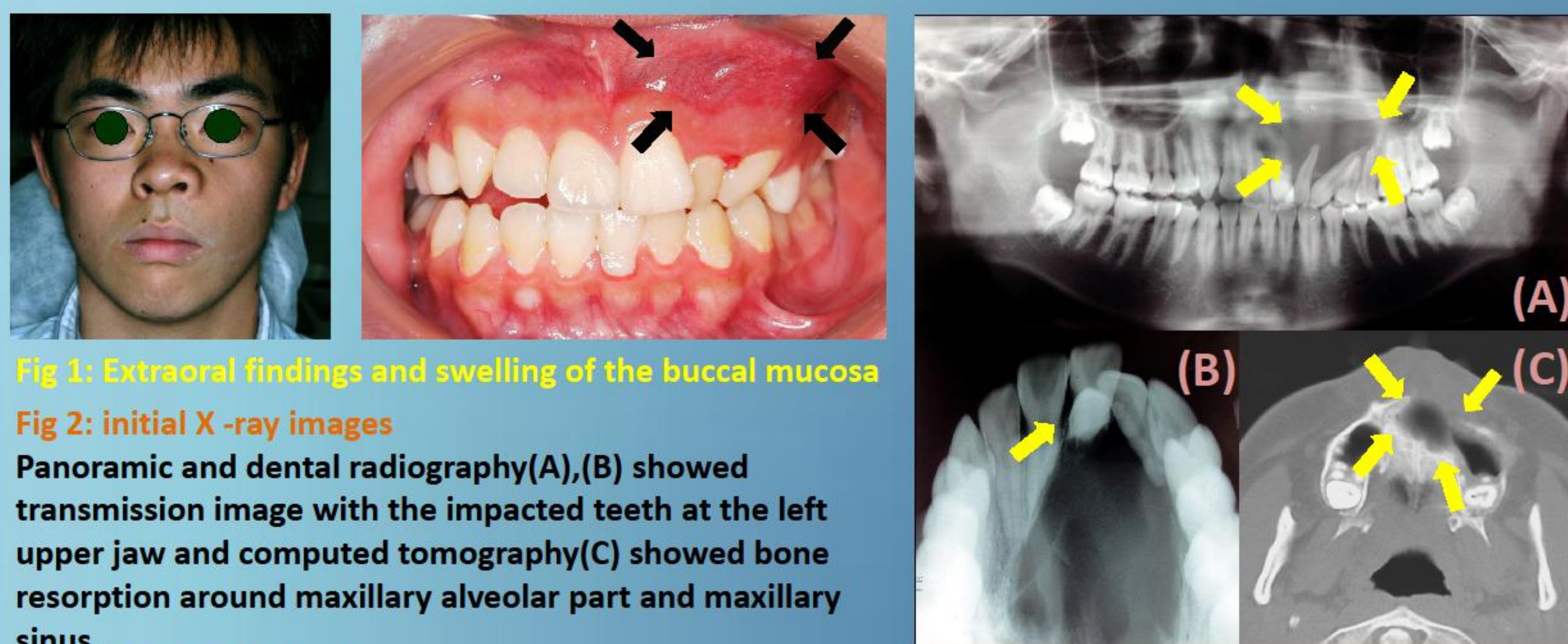
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## Introduction

In oral surgery, opportunity to invasive treatment, including tooth extraction for hemophilia patients is not a few. It is necessary to appropriately treat the hemostasis process with replacement therapy in consideration of the degree of surgical stress and the deprivation factor before surgery. In our study the postoperative infection of cystectomy for hemophilia A patients, was struggling in the oral cavity hemostasis management.

## Case report

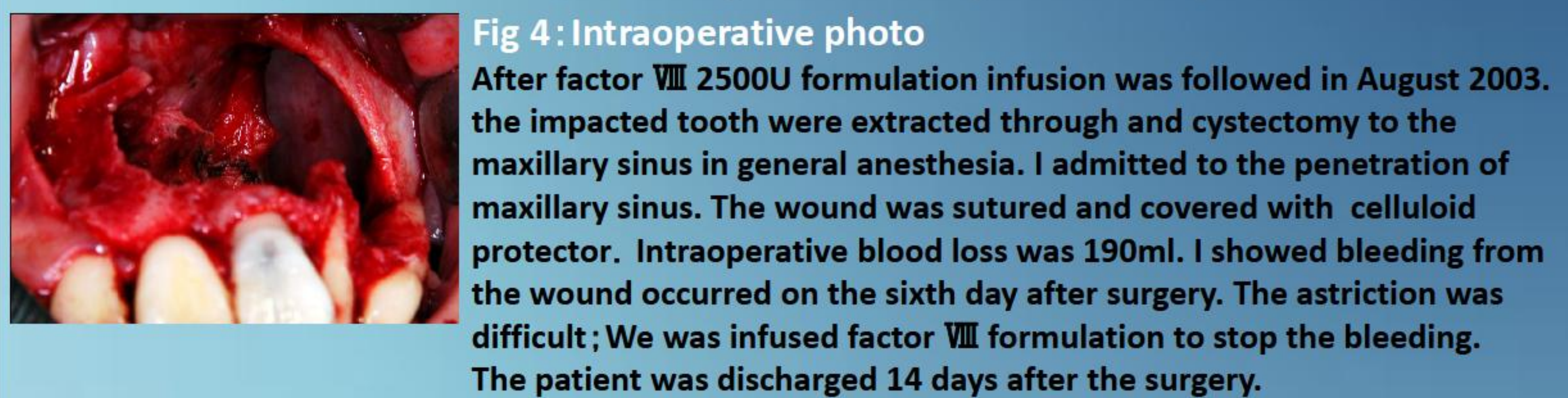
**Patient** : 16Y, male.  
**Initial consultation** : July, 2003.  
**Chief Complaint** : Left cheek swelling.  
**Past medical history** : Diagnosed with hemophilia A in 1992 older arm muscle hemorrhage.  
**Family history** : Grandfather with hemophilia.  
**History of present** : The swelling of the left cheek in June 2003 led patient to consult the Oral and Maxillofacial Surgery of this hospital.



**Fig 3: Initial visit blood test**

WBC	6400/μl	CRP	0.7mg/dl	CK	105IU/l	PT	14.0sec
RBC	633 × 10 <sup>4</sup> /μl	TP	7.3g/dl	LDH	149IU/l	aPTT	64.0sec
Hb	14.7g/d	Alb	4.7g/dl	ALP	596IU/l	Bleeding time	4.5min
Ht	44.4%	AST	22IU/l	UA	6.4mg/dl	FVIII :C	14%
Pt	21.5 × 10 <sup>4</sup> /μl	ALT	11IU/l	Na	140mEq/l	FVIII :Ag	9%
		γ-GPT	15IU/l	K	4.2mEq/l	vWF :Ag	110%
				Cl	100mEq/l	FVIII inhibitor	<0.3BU/ml

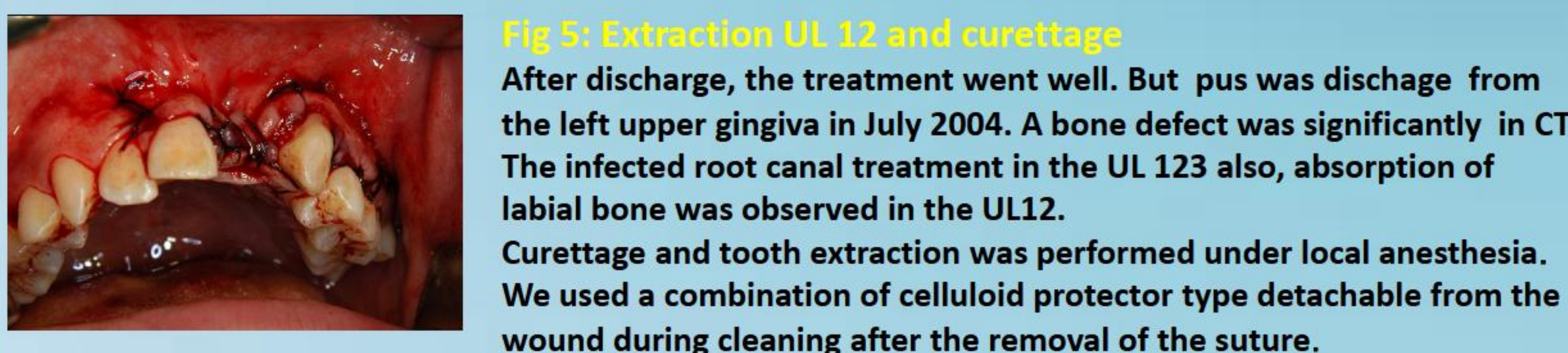
### Clinical diagnosis : Dentigerous cyst at the left maxillary anterior



**Fig 4: Intraoperative photo**  
After factor VIII 2500U formulation infusion was followed in August 2003, the impacted tooth were extracted through and cystectomy to the maxillary sinus in general anesthesia. I admitted to the penetration of maxillary sinus. The wound was sutured and covered with celluloid protector. Intraoperative blood loss was 190ml. I showed bleeding from the wound occurred on the sixth day after surgery. The astriction was difficult; We was infused factor VIII formulation to stop the bleeding. The patient was discharged 14 days after the surgery.

**Table 1: Course at the time of the cystectomy**

	OP	Postoperative(day)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Factor VIII(U)	2500	2500	2500	2500			2500	2000	2000							
Factor activity(%)	99	80	73				80								9	
Antiplasmin		Tranexamic acid 750mg/day														
Antibiotics		FMOX 2g/day			CFDN 300mg/day											
Celluloid protector		Single type														
Bleeding		[Red arrow indicating bleeding period]														
Hemostasis		[Grey arrow indicating hemostasis period]														



**Fig 5: Extraction UL 12 and curettage**  
After discharge, the treatment went well. But pus was discharge from the left upper gingiva in July 2004. A bone defect was significantly in CT. The infected root canal treatment in the UL 123 also, absorption of labial bone was observed in the UL12. Curettage and tooth extraction was performed under local anesthesia. We used a combination of celluloid protector type detachable from the wound during cleaning after the removal of the suture.

**Table 2: Course at the time of tooth extraction and curettage**

	OP	Postoperative(day)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Factor VIII(U)	2500	2000	1500	1500			2500	2500								
Factor activity(%)	81	80	73				81									
Antiplasmin		Tranexamic acid 1500mg/day														
Antibiotics		FMOX 2g/day			CFPN-PI 300mg/day											
Celluloid protector		Single type							Combination type							
Bleeding		[Red arrow indicating bleeding period]														
Hemostasis		[Grey arrow indicating hemostasis period]														

**Fig 6: Single type and combination type celluloid protector**

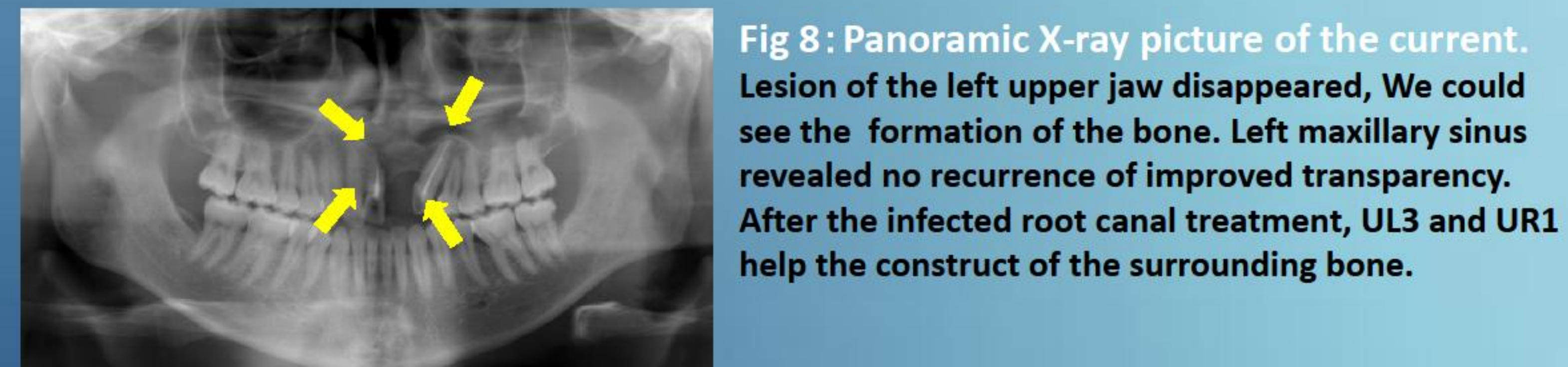


**[(1) Single type celluloid protector]**  
The wound surface protective agent and plastic sheet. Direct view of the bleeding site is difficult, observation of the wound is not possible until it is removed

**[(2) Combination type celluloid protector]**  
Transparent resin and plastic sheet. Without the need for a wound protective agent, a detachable during washing, The direct view of the wound is possible.

In the present case, the adaptation is difficult because the wound is large and can not be obtained as expected. Therefore, I chose a single type that uses the wound surface protective agent. However, the patient bled on day 6 after the surgery. This is because it is the scope to protect was covering the gingival and a number of teeth, This caused distortion, and stimulated the mucosa incision. It was also thought to be due to the fact of blockage to the maxillary sinus, and we could not sufficiently perform topical hemostasis.

### Histopathological diagnosis : Dentigerous cyst



**Fig 8: Panoramic X-ray picture of the current.**  
Lesion of the left upper jaw disappeared, We could see the formation of the bone. Left maxillary sinus revealed no recurrence of improved transparency. After the infected root canal treatment, UL3 and UR1 help the construct of the surrounding bone.



**Fig 9: Oral photograph of the current**  
Alveolar mucosa has remained normal. We found the exposed roots of UL3 have no mobility. Course is a better prosthesis by partial denture. After that, We also enforced tooth extraction of the wisdom tooth in the upper, lower, left and right under local anesthesia in under the administration of factor VIII preparations in the hospital under. The postoperative course is good.

## Discussion

In oral surgery area, local hemostasis is required in addition to replacement therapy when performing invasive procedures in hemophilia patients. Select the desired level in accordance with the treatment guidelines of replacement therapy is required in the guidelines of WFH of 2005. we are referring for these procedure.

**Table 3: WFH guidelines 2005 of replacement therapy**

Type of hemorrhage	Hemophilia A		Hemophilia B	
	Desired level	Duration(day)	Desired level	Duration(day)
Surgery(major)				
Pre-OP	80~100%		60~80%	
Post-OP	60~80%	1~3	40~60%	1~3
	40~60%	4~6	30~50%	4~6
	30~50%	7~14	20~40%	7~14

It has become possible due to advances in replacement therapy for hemophilia, to consider the adaptation of invasive procedures to the same patients without bleeding. The opportunity to receive surgery is also increasing. Combination of anti-plasmin drugs, to devise the celluloid protector, as in the present case in oral surgery area, which we also considered important.

## References

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