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Two cases of peritonsillar abscess complicated by von Willebrand disease

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ABSTRACT

Von Willebrand disease (vWD) is a common hereditary bleeding disorder resulting from a quantitative and/or qualitative deficiency of von Willebrand factor (vWF). We report two cases of peritonsillar abscess complicated by vWD. A 46-year-old Japanese man was intravenously administered factor VIII clotting antigen (500 U × 3 days)and platelet transfusion (10 U), when before puncture was performed. After puncture, his symptoms promptly improved with the administration of the antibiotic doripenem (DRPM, 1.5 g/day). He left our facility one week later and had no recurrence of symptoms. A 24-year-old Japanese woman was intravenously administered factor VIII clotting antigen (4500 U × 3 days) and desmopressin (DDAVP) before undergoing a puncture. Her symptoms promptly improved with DRPM treatment (1.5 g/day). The patient left our facility one week later. However, the peritonsillar abscess recurred in three weeks. Afterwards, tonsillectomy was enforced three months later. Intravenous factor VIII clotting antigen (4500 U × 2 days) and platelet transfusion (10 U × 1 day) had been used before tonsillectomy.

We therefore suggest that a peritonsillar abscess in patients with vWD can be safely treated by factor VIII clotting antigen and DDAVP at the appropriate disease stage and by performing paracentesis for the acute phase or tonsillectomy for the chronic phase.

1. Introduction

The surgical treatments for a peritonsillar abscess are puncture, incision, or abscess tonsillectomy. In our facilities, abscess tonsillectomy is the preferred treatment, especially if the patient has no haematological disorder [1]. However, this treatment may need to be carefully considered for patients taking anti-coagulants, patients with a blood disease, and patients for whom general anaesthesia is risky [2]. von Willebrand disease (vWD) is a common hereditary bleeding disorder resulting from a quantitative and/or qualitative deficiency of von Willebrand factor (vWF). We report here two cases of peritonsillar abscess complicated by vWD. We also discussed treatment methods, based on bibliographical reports.

2. Case reports

2.1. Case 1

In September 2010, a 46-year-old Japanese man presented with a four-day history of pharyngeal pain and pain on swallowing. He was referred to another clinic where he was diagnosed with a peritonsillar abscess, based on pharyngeal findings. He subsequently visited our hospital for examination and treatment. He had a medical history of vWD (unknown type) lasting 30 years. However, he had few haemorrhagic symptoms. A physical examination showed displacement of the uvula and bilateral swelling of the tonsils.

On admission, enhanced computed tomography (CT) revealed an abscess on the outside of the right tonsil (Fig. 1). Table 1a shows the laboratory data.

A physician afterwards intravenously administered factor VIII clotting antigen (500 U) and platelet transfusion (10 U). Next, a puncture was performed and a dark yellow effusion of about 2 ml was seen. Intravenous factor VIII clotting antigen (500 U/day) was administered for three days after the puncture treatment. No haemorrhage was seen after the puncture. Inspection of the bacterial culture revealed the presence of the anaerobic bacteria *Prevotella oralis*. The patient's symptoms promptly improved with the administration of the antibiotic doripenem (DRPM, 1.5 g/day). He left our facility one week later and had no recurrence of symptoms.

2.2. Case 2

In October 2010, a 24-year-old Japanese woman presented with a one-week history of pharyngeal pain and general malaise. She

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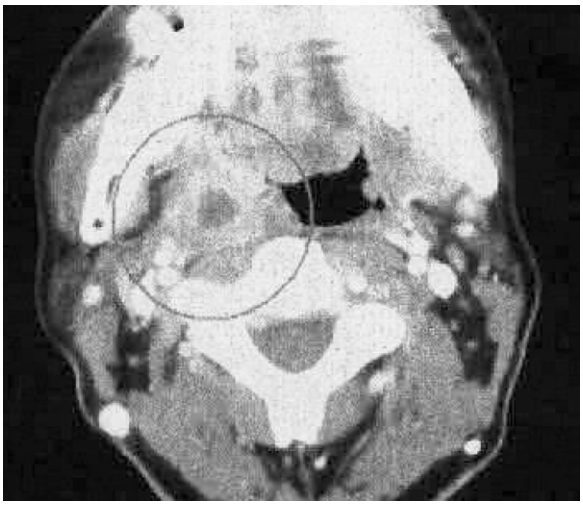

Fig. 1. Case 1. Enhanced computed tomography (CT) shows an abscess on the outside of the right tonsil.

was referred to another clinic where she was diagnosed with a peritonsillar abscess, based on pharyngeal findings. The oral antibiotic levofloxacin (LVFX) was initiated at 500 mg/day. However, her symptoms did not improve. She subsequently visited our hospital for examination and treatment. She had a medical history of type 2A vWD lasting 20 years, and she had repeated episodes of menometrorrhagia and nasal bleeding. A physical examination showed displacement of the uvula, swelling of left tonsil and trismus (Fig. 2a). Table 1b shows the laboratory data.

On admission, enhanced computed tomography (CT) revealed an abscess on the outside of the left tonsil (Fig. 2b). A physician then intravenously administered desmopressin (DDAVP) and factor VIII clotting antigen (4500 U). Next, a puncture was performed and a dark yellow effusion of about 5 ml was seen. No haemorrhage occurred after the puncture. Inspection of the bacterial culture revealed that there were no bacilli present. Intravenous factor VIII clotting antigen (4500 U/day) was administered for two days after the puncture treatment. Her symptoms promptly improved with the administration of the antibiotic DRPM (1.5 g/day). She left our facility one week later. However, three weeks after leaving the hospital, a physical examination showed displacement of the uvula, swelling of left tonsil and trismus (Fig. 3a). The CT finding was the same as before (Fig. 3b).

Table 1
Laboratory data.

Date	Standard value	Case 1 September 2010
(a)		
WBC	4500–8500/μl	15,500
RBC	410–530 × 10,000	451
Hb	14.0–18.0 g/dL	14
Ht	39.0–52.0%	41
Plt	13.0–32.0 × 10,000	20.9
PT	70–120%	78
APTT	26.1–35.6 s	46.8
CRP	<0.3 mg/dL	9.58

Date	Standard value	Case 2		
		October 2010	November 2010	January 2011
(b)				
WBC	4500–8500/μl	14,210	16,200	5350
RBC	410–530 × 10,000	446	371	449
Hb	14.0–18.0 g/dL	7.3	5.1	7.7
Ht	39.0–52.0%	26.8	19.2	28.5
Plt	13.0–32.0 × 10,000	25.5	20.1	22.3
PT	70–120%	68	73	91
APTT	26.1–35.6 s	63.5	44.8	58.9
CRP	<0.3 mg/dL	5.34	6.44	0

She again required treatment. Inspection of the bacterial culture revealed the presence of the anaerobic bacteria *Streptococcus anginosus*. Abscess tonsillectomy was considered but abandoned because of genital haemorrhage and anaemia.

Three months later, a tonsillectomy was necessary. Before the operation, she intravenously received factor VIII clotting antigen (4500 U) and platelet transfusion (10 U). The amount of blood was 5 ml without the coagulation device. The operation time was 80 min. However, because a little bleeding was seen the first postoperative day, a pre-mixed fibrinogen medicine (TachoComb® CSL Behring, Tokyo, Japan) was spread on the area, which stopped the bleeding. After the operation, factor VIII clotting antigen was administered intravenously for six days. The patient left our facility one week after the operation (Fig. 4).

3. Discussion

The surgical treatments for a peritonsillar abscess are puncture, incision, or abscess tonsillectomy. The selection of treatment method depends on the stage of the disease, the idea of the

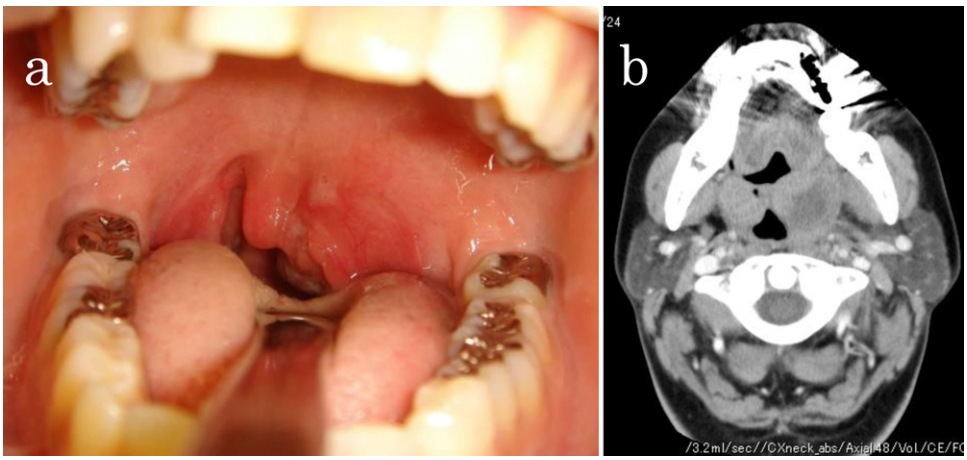

Fig. 2. A physical examination shows displacement of the uvula, swelling of the left tonsil, and trismus (a). Enhanced computed tomography (CT) shows an abscess on the outside of the left tonsil (b).