# A Case of Submucosal Hematoma of The Esophagus and Stomach, Possibly Caused by Fish Bone Ingestion

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(Received January 19, 2010; Accepted February 2, 2010)

Submucosal hematoma of the esophagus is a rare disorder. We encountered a 70-year-old woman with an extremely large submucosal hematoma of the esophagus that extended from the cervical esophagus to the gastric angle. It was likely that her hematoma was caused by accidental ingestion of a fish bone, and her condition improved with conservative treatment alone. In this article, we summarize the reported cases of submucosal hematoma of the esophagus in Japan, and discuss the case with a review of the literature.

Key words: esophageal submucosal hematoma, foreign body, fish bone

#### **INTRODUCTION**

Submucosal hematoma of the esophagus is a rare disorder and is classified into idiopathic and traumatic types. The former is thought to be associated with a high intraluminal pressure caused by nausea, emesis and/or blood coagulation abnormalities, while the latter is caused by a direct wound in the esophagus by foreign objects, or other trauma, such as external injuries, cardiac massage, endoscopic injection sclerotherapy for esophageal varices. We encountered a patient with submucosal hematoma of the esophagus that appears to have been caused by a fish bone. This was thought to be a very rare case in which the hematoma extended broadly from the cervical esophagus to the gastric angle. In this article, the case is presented with endoscopic and computed topography (CT) images according to the time course from onset to cure, and is discussed based on the reported cases of submucosal hematoma of the esophagus in Japan.

## CASE REPORT

Patient: 70-year-old woman

Chief complaint: Hematemesis

Onset and Course: A yellowtail bone became lodged in the throat of the patient while she was eating dinner. Upon drinking large amounts of water to flush the bone from her throat, she felt an unpleasant sensation move to her chest. She subsequently vomited a small amount of blood and was transported to the emergency room of our hospital.

Past history: The patient had hypertension and arteriosclerosis from about the age of 60, for which she was being treated with medication by a local doctor.

Family history: Noncontributory

Personal history: Alcohol (-), Tobacco (-),

Medications: Nifedipine (20 mg), 1 tablet twice a day; aspirin (81 mg), 1 tablet once a day

Physical examination: Height, 147 cm; weight, 63 kg;

blood pressure, 140/90 mmHg; pulse, 86 beats/min (regular); body temperature,  $36.4^{\circ}$ C; SpO<sub>2</sub>, 97% (room air). Conjunctiva was not icteric or pale. Heart sounds were regular without murmur and breath sounds were clear. Abdomen was flat and soft and bowel sounds were normokinetic. No tenderness, rebound tenderness or guarding was observed in the abdomen. She had no pretibial pitting edema.

The results of tests in admission showed almost no abnormalities, with no anemia and no findings of inflammation (Table 1). On thoracoabdominal CT scan, no fish bone but conspicuous thickening of the esophageal wall was observed from the cervical to the lower esophagus. Raised shapes were observed to protrude on the esophageal lumen side, which seemed to narrow the lumen. With regard to the stomach, there was also thickening in the submucosal layer with low CT density from the cardiac to the body regions of the stomach (Fig. 1). On upper gastrointestinal endoscopic examination, there was a point of submucosal bleeding in the posterior wall of the middle pharynx that might have been caused by the penetration of the fish bone, and a submucosal hematoma about half of the circumference of the esophagus was seen mainly in the left wall that continued from the cervical esophagus to the esophagogastric junction with blood seeping from some portions. The fish bone itself could not be confirmed by examination (Fig. 2). The patient was diagnosed with bleeding from a submucosal hematoma of the esophagus that occurred together with ingestion of food, and the lesion was sprayed with 10,000 U of thrombin. The course was observed with conservative treatment based on intravenous drip management with nothing by mouth except for drugs; aspirin was discontinued after the informed consent on the risk of bleeding from the lesion comparing with that of possible progression of arteriosclerosis, and 10,000 U of thrombin, 4 times a day for 3 days, and 20 ml of

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Table 1 Laboratory 1	Data c	on Ad	mission.
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WBC	7,800/µl	BUN	15 mg/dl
Hb	13.0 g/dl	Creatinine 0.7 mg	g/dl
Platelets	$18.8 \times 10^4/\mu l$		
		Na	140 mEq/l
		K	3.3 mEq/1
Total protein	7.2 g/dl	Cl	102 mEq/1
Total bilirubin	0.7 mg/dl		
AST	21 U/1	CRP	< 0.09 mg/dl
ALT	13 U/1		
LDH	297 U/1	PT	109%
ALP	309 U/1	APTT	24 s
γ-GTP	10 U/1		

AST: aspartate aminotransferase; ALT: alanine aminotransferase;

LDH: lactate dehydrogenase; ALP: alkaline phosphatase;

 $\gamma\text{-}GTP\text{:}\ \gamma\text{-}glutamyl\ transpeptidase;}$  BUN: blood urea nitrogen;

PT: prothrombin time; APTT: activated partial thromboplastin time.



Fig. 1 Initial thoracoabdominal CT findings.

No fish bone was found. (A, B, C) Conspicuous thickening of the esophageal wall is seen continuing from the cervical esophagus to the lower esophagus. Raised shapes are seen protruding on the esophageal lumen side, and there is narrowing of the lumen. (D) Wall thickening that shows low density is seen in the submucosa from the cardiac to the body regions of the stomach (arrows).



Fig. 2 Initial upper gastrointestinal endoscopy findings.(A) Point of submucosal bleeding that might have been caused by a fish bone piercing the posterior wall of the middle pharynx (arrow). (B, C, D) A submucosal hematoma about half of the circumference of the esophagus, mainly in the left, wall continued from the cervical esophagus to the esophagogastric junction, with blood seeping from some portions.

sodium alginate, 4 times daily, were used. Drip infusion containing carbazochrome sodium sulfonate 100 mg/day, tranexamic acid 1,000 mg/day, cimetidine 800 mg/day and cefmetazole 2 g/day was administered. The patient had a fever of 38°C on the day 3 in hospital, but this resolved spontaneously on the following day. She presented with melena for the first several days, but anemia was mild and no blood transfusions were given. On upper gastrointestinal endoscopic examination on the day 6 in hospital, the hematoma only remained in the lower esophagus, however, broad submucosal dissection with partial ulceration and a pocket-like structure with blind end on the anal side was observed. In addition, there was a change to a dark purple color with swelling, flare, and erosion that suggested submucosal bleeding from the gastric angle through the cardia and gastric fundus (Fig. 3). The thickening of the esophageal wall improved on a thoracoabdominal CT scan on day 9 in hospital, and the lumen had enlarged. Bilateral pleural effusion was seen, but there was no accumulation of air or fluid in the mediastinum (Fig. 4). On esophagography on the same day, passage was good with no leakage, and ulceration only remained in the left wall (Fig. 5). The pharyngeal and thoracic pain disappeared from the day 11. Upper gastrointestinal endoscopy examination

on day 12 confirmed that the hematoma was no longer present and thin ulcers after submucosal dissection in the hematoma lesion remained, showing a tendency for re-epithelialization (Fig. 6). She began eating on the same day. There was no marked change in course after she started eating, and she was discharged from the hospital on day 16. Scarring of the ulcerated area and disappearance of the color change in the gastric body were subsequently confirmed by upper gastrointestinal endoscopy examinations during outpatient visits. She returned to the local doctor and started the medications including low-dose aspirin, and there have since been no recurrences.

## DISCUSSION

Submucosal hematoma of the esophagus is a rare disorder and is considered to be a form of esophageal injury. According to Shima *et al.* [1] and Furukawa *et al.*, [2] esophageal injury may be divided broadly into mechanical and chemical injuries. Mechanical injury is further classified into traumatic and spontaneous types; the former is caused by accidental ingestion of foreign objects or medical procedures such as endoscopic examination and procedures, intubation of nasogastric tube and dilatation of constrictions; the latter accompanies increased intraluminal pressure

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Fig. 3 Upper gastrointestinal endoscopy findings on day 6 of hospitalization.(A) Hematoma remaining in the lower esophagus. (B) Ulceration is seen behind submucosal dissection of the esophagus in the left wall 25 to 35 cm from the incisors.(C) A pocket is formed in the submucosa in the bottom portion. (D) A change to a dark purple color with swelling, flare, and erosion is seen that suggests submucosal bleeding from the gastric angle through the cardia and gastric fundus.



Fig. 4 Thoracoabdominal CT findings on day 9 of hospitalization. There is improvement in the thickening of the esophageal wall and expansion of the lumen.





Fig. 5 Esophagography findings on day 9 of hospitalization. Ulceration mainly of the left wall is seen from the esophagus in the central to lower chest (arrows). There is no leakage, and good passage.



Fig. 6 Upper gastrointestinal endoscopy findings on day 12 of hospitalization. (A, B, C) Esophageal hematoma is no longer seen. Formation of shallow ulcers behind the hematoma mucosal dissection mainly in the left wall, and a tendency for epithelialization of the ulcer surface, is seen 18 to 35 cm from the incisors. (D) The area of dark coloration in the gastric mucosa has also decreased.



**Fig. 7** Upper gastrointestinal endoscopy findings on day 45 after admission. (A, B, C) Scarring is seen in the area where the esophageal ulcers formed. (D) The color change, flare, and erosion of the gastric mucosa have also disappeared.

in the esophagus due to nausea, emesis and/or blood coagulation abnormalities. Representative spontaneous injuries include spontaneous rupture of the esophagus, reported by Boerhaave in 1724 as tearing of all layers of the esophagus [3], Mallory-Weiss syndrome, reported by Mallory and Weiss in 1929 as bleeding from local tears in mucosa of the esophagogastric junction [4], and spontaneous submucosal dissection of the esophagus, reported by Williams in 1957 for hematomas found in the esophageal submucosa [5]. Since the report by Williams, this condition has been referred to by various names, including submucosal hematoma, submucosal dissection and intramural hematoma of the esophagus. Spontaneous submucosal hematoma of the esophagus is also broadly divided into 2 subgroups according to the presence of factors causing a tendency to bleed, such as drugs or underlying disease [6].

With regard to the onset mechanism in the present case, the hematoma is thought to have occurred as a result of traumatic factors related to a fish bone and there was no forced vomiting stimulation. Therefore, the case is classified as a mechanical, traumatic type. In addition, the patient was taking an antiplatelet agent, which may have led to extensive submucosal hematoma formation from the cervical esophagus past the esophagogastric junction to the gastric angle. To date, there has been only one report in Japan of submucosal hematoma of the esophagus extending all the way to the gastric angle [7], and the present case is thought to be extremely rare.

In order to clarify the clinical features of this disorder in Japan and to compare them with this case, we searched Pub-Med and Ichushi-Web with the keywords of "esophageal submucosal hematoma" or "intramural hematoma of esophagus" and only the Japanese cases were selected from the results. The number of the cases from 1982 to 2009, including meeting abstracts and the present case, and excluding cases of direct iatrogenic esophageal injury, is 79 (Table 1). [1, 7-75] The patients included 35 men and 44 women, and the ages ranged from 32 to 84 years (mean age, 61.6 years), with a tendency toward older patients. The chief complaint was hematemesis in 60 cases, followed by chest pain in 26 cases, chest discomfort in 20 cases, and epigastralgia in 8 cases. There were only 8 cases with findings from the esophagus to the stomach, which consisted of 2 cases of hematoma with Mallory-Weiss syndrome complications reported by Shinozawa et al. [35] and Ichida et al., [64] a case of hematoma to the fornix in by Kubota et al., [37] 3 cases to the cardia reported by Karasawa et al., [53] Sakai et al. [68] and Kawashima et al., [70] and 2 cases to as far as gastric angle reported by Koyama et al. [7] and in the present paper. Comorbidities included chronic renal

Table 2	Cases	of Esc	phageal	Submucosal	Hematoma	in .	Japan.
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No.	Author	Year	Sex	Age	Location	Chief complaint	Complications	Impaired	Food-relaled	Ref
								hemostasis	injury	
1	Hasegawa	1982	F	82	Ut-Mt	Hematemesis, Epigastralgia	Thrombocytopenia	Aspirin	N.M.	8
2	Shima	1984	М	43	Ce-EGJ	Hematemesis, Chest pain	(-)	Aspirin	N.M.	1
3	Hasebe	1984	F	40	Ut-Mt	Hematemesis	(-)	(-)	(-)	9
4	Konagaya	1986	F	51	Ce	Hematemesis	CRF HD	Henarin	(_)	10
5	Konagaya	1086	F	19	Ce	Hematemesis		()	(+)	10
5	Konagaya	1960	r M	50		Hematemosis		(-)		10
5	riusawa	1960	M	10	Ut-EGJ	nematemesis		(-)	IN.IVI.	10
1	Harada	1987	M	40	Mt	Nausea	CKF, HD	Heparin	IN.MI.	12
8	Isukioka	1988	F	44	Ce-Ae	Epigastralgia, Dysphagia	(-)	(-)	(+)	13
9	Ooshika	1991	Μ	63	?	Epigastric discomfort	CRF, HD	Heparin	N.M.	14
10	Matoba	1992	F	38	Ut	Hematemesis	(-)	(-)	(+)	15
11	Furukawa	1992	F	44	Mt-Lt	Chest pain,	(-)	(-)	N.M.	16
						Hematemesis				
12	Shimada	1993	F	41	Ut-Lt	Sore throat, Chest	(-)	(-)	(+)	17
10		1004	N	41	O IL	pain, Hematemesis				10
15	Zemya	1994		41	Ce-Ut	riematemesis		(-)	(+)	18
14	Zeniya	1994	M	45	Ce-EGJ	Hematemesis	(-)	(-)	IN.M.	18
15	Takamı	1994	Μ	43	Ce-EGJ	Chest pain, Emesis	(-)	(-)	(+)	19
16	Yamada	1995	М	64	Ut-Lt	Emesis, Chest pain, Hematemesis	LC	(+)	N.M.	20
17	Nagata	1995	Μ	75	Mt-EGJ	Emesis, Hematemesis	Ileus	(-)	(-)	21
18	Ousaka	1995	М	50	Ut- Lt	Emesis, Hematemesis	(-)	(-)	(+)	22
19	Kovama	1996	F	73	Ut-EGI	Hematemesis	(-)	(-)	N.M.	7
20	Nagayama	1996	F	57	Ut	Emesis, Hematemesis	(-)	(-)	(+)	23
91	Hasebe	1997	F	51	Mt-I t	Hematemesis	CRF HD	Henarin	(-)	94
<u>2</u> 1 99	Hasebe	1007	M	29	I t	Emerie Hematemerie		()		9/
92	Tapaka	1007	F	52	Lit	Homatomosis		(-)	(1)	95
2J 94	Tanaka	1007	Г	60		Chast pain		(-)	(-)	25
24		1997	r M	71	ULECI	Chest pain		(-)	(-)	2.5
25	Shinogi	1997	N	/1	Ut-EGJ	Epigastralgia,	Cerebrai infarci	therapy	(+)	20
96	Matani	1009	м	4.4	M4 T 4	Chart main			(1)	07
20		1996	IVI D	44	MI-LI		(-)	(-)	(+)	21
27	Amagai	1998	F	60	Ut-EGJ	Emesis, Hematemesis	(-)	(-)	(+)	28
28	Endoh	1998	F	67	Ce-EGJ	Epigastralgia, Hematemesis	(-)	(-)	(+)	29
29	Endoh	1998	F	49	Ce-Ut	Emesis, Hematemesis	(-)	(-)	N.M.	29
30	Sanaka	1998	F	57	Ce-Ut	Uncomfortable sensa- tion in the throat	(-)	(-)	(+)	30
31	Ohara	1999	F	59	Ut- Lt	Chest pain, Hematemesis	(-)	(-)	(+)	31
32	Ishii	1999	F	56	Ut-EGI	Chest pain	(-)	(-)	(+)	32
33	Ishii	1999	М	55	Mt-Lt	Chest pain,	(-)	(-)	(+)	33
0.4	X7	1000	г	70	5	riematemesis			NIM	a 4
34	ramamoto	1999	F	70	r M For	Chest and back pain	(-)	(-)	IN.M.	34
35	Shinozawa	1999	М	49	Mt-EGJ M-W (+)	Emesis, Hematemesis	(-)	(-)	N.M.	35
36	Masaki	2000	F	67	Ut-EGJ	Hematemesis	(-)	(-)	(+)	36
37	Kubota	2000	М	76	Ce-EGJ -Fornix	Hematemesis	Cerebral embolism	Thrombolytic therapy	N.M.	37
38	Uehara	2000	F	48	Mt- EGJ	Chest pain, Hematemesis	CRF, HD	Heparin	N.M.	38
39	Handa	2000	F	73	Ut-EGJ	Chest pain,	(-)	(-)	(-)	39
40	C1.:	0000	E		T IA	Finite station 1	CDE UD	TT	NM	40
40	Shimomura	2000	F F	55	Ut	Epigastric discomfort	CKF, HD	Heparin	IN.M.	40
41	Yamashita	2000	F -	67	Mt-Lt	Hematemesis	Cerebral aneurysm	Heparin	IN.M.	41
42	Noma	2001	F	57	£	Hematemesis	(-)	(-)	N.M	42

1						i .	L	1	i i		
	43	Kise	2001	F	84	Mt-Lt	Chest discomfort, Hematemesis	Dissecting aortic aneurysm	(-)	N.M.	43
	44	Yamamoto	2002	F	52	Ut-EGJ	Upper abdominal	ITP	(+)	N.M.	44
	15	Nichinglagowa	9009	Б	57	T T+	pam Emosis Homotomosis			$\langle u \rangle$	45
	45	Nishinakagawa	2002	r	57	UL	Emesis, Hematemesis	(-)	(-)	(+)	45
	40	Nishinakagawa	2002	м	66	Ut-EGJ	Chest discomfort,	(-)	Antiplatelet	(+)	45
							Hematemesis		therapy		
	47	Nakazawa	2002	F	71	Ut-Mt	Hematemesis	CHF	Aspirin	(+)	46
	48	Tokuhiro	2002	F	75	Ut-EGJ	Chest pain, Hematemesis	(-)	(-)	(+)	47
	40	Kouzu	9009	г	56	Ut FCI	Chost pain		()	(1)	19
	49	Kouzu	2002	г	50	UI-EGJ	Chest pain		(-)	(+)	40
	50	Inomata	2002	F	67	Ce-Lt	Dyspnea	Esophageal achala- sia	(-)	N.M.	49
	51	Inomata	2002	F	74	Ce-Mt	Hematemesis, Chest	(-)	(-)	(+)	49
							discomfort				
	59	Murayama	2003	м	74	Hypo	Hematemesis	OMI	Antiplatelet &	(+)	50
	54	withayama	2003	IVI	/1	nhowmy	Ticillatellicsis	Dulmonory inform	Wanfarin	(1)	50
						pharynx		Fullionary infarct	wariariii		
						-EGJ		DVT			
	53	Akashi	2003	Μ	56	Mt-Lt	Hematemesis	Artificial valve	Warfarin	N.M.	51
								replacement			
	54	Mitogawa	2003	F	67	Mt	Chest pain	(-)	(-)	(+)	52
	55	Karasawa	2003	F	78	Ut-EG]	Epigastralgia,	(-)	(-)	(-)	53
						cardia	Hematemesis			( )	
	56	Kato	9008	м	62	Mt EC I	Chost discomfort	Post on	()	()	54
	50	Kato	2003	IVI	05	MI-EGJ	Chest disconnort,	rost op	(-)	(-)	54
							Hematemesis				
	57	Yabu	2003	Μ	51	Ut-Lt	Chest pain, Emesis,	(-)	(-)	(+)	55
							Hematemesis				
	58	Wakiyama	2003	F	61	Ut-Lt	Chest pain,	RA	(-)	N.M.	56
		,					Hematemesis				
	59	Oonita	2004	F	67	∐t₋I t	Enigastralgia Emesis	(_)	(_)	(+)	57
	00	oomaa	2001	1	07	Ot Lt	Homatomosis			(')	0,
	<u> </u>	TT .	0004		0.0	<b>T</b> .T.	riematemesis			NT N (	50
	60	Hata	2004	М	83	Ut	Chest pain	(-)	(-)	N.M.	58
	61	Nagai	2004	Μ	66	Ut-Lt	Emesis, Hematemesis	(-)	(-)	(-)	59
	62	Nakazawa	2004	Μ	63	Ut-EGJ	Hematemesis	CRF	(-)	N.M.	60
	63	Nakae	2005	Μ	66	Ut-EGJ	Chest pain,	Cerebral arterioste-	Ticlopidine	(-)	61
							Abdominal pain,	nosis	Aspirin		
							Hematemesis		Heparin		
	64	Okamura	2005	М	84	Mt-Lt	Emesis Upper abdomi-	Cerebral infarct	Aspirin	N.M.	62
							nal pain	Δf	P		
	GE	S-:4-	9005	м	75	C- ECI			Tislanidia a	(1)	69
	05	Sano	2005	IVI	15	Ce-EGJ	Sore throat,	Angina pectosis		(+)	03
							Chest pain,		Aspirin		
							Hematemesis				
	66	Ichida	2006	F	63	Ce-EG	Epigastralgia,	(-)	(-)	N.M.	64
						JM-Wtear	Hematemesis				
	67	Kosedo	2006	Μ	67	?	Sore throat,	Artificial valve	Warfarin	N.M.	65
							Chest pain.	replacement	Aspirin		
							Hematemesis	P	P		
	68	Iwamoto	9007	м	79	Mt	Emosis Chost pain	Artoriostonosis	Aspirip	()	66
	08	Iwamoto	2007	IVI	14	IVIL	Emesis, Chest pain,		Aspirin	(-)	00
							Hematemesis	obliterans			
								Angina pectosis			
	69	Noumi	2007	F	58	Mt-Lt	Emesis, Hematemesis	(-)	(-)	N.M	67
	70	Sakai	2007	Μ	69	Mt-EGJ	Dysphagia, Emesis	(-)	Aspirin	N.M	68
						Cardia					
	71	Inamura	2007	М	67	Ut-EGI	Chest pain	(-)	(-)	N.M.	69
	79	Kawashima	2008	F	74	Ce-EC-I	Sore throat	Angina pectosis	Aspirip	NM	70
	14	mannilla	4000	T	/ 1	Cardia	sore unoat	ringina peciosis	. spii iii	1 1.171.	10
	<b>H0</b>	T7 1 *	0000		C.A	Cartila	The second state	ODE UD	TT	NIM	-
	13	Kawashima	2008	М	04	Ce-EGJ	Epigastralgia,	UKF, HD	Heparin	IN.M.	70
							Sore throat,				
							Hematemesis				
	74	Oota	2008	Μ	83	Ut-EGJ	Chest pain,	Angina pectosis	Aspirin	(+)	71
							Hematemesis				
	75	Enomoto	2008	М	84	Ce-EGI	Chest discomfort.	(-)	(-)	N.M.	72
	-					~J	Emesis, Hematemesis		. /	-	
					1	I		I	I		i l

76	Tobari	2008	F	69	Ce-EGJ	Chest discomfort,	Cerebral infarct	Antiplatelet	(+)	73
						Hematemesis				
77	Hara	2009	F	81	Ce-EGJ	Emesis,	(-)	(-)	(+)	74
						Chest discomfort				
78	Hirotani	2009	Μ	77	Ce-EGJ	Chest discomfort,	Angina pectosis	Aspirin	N.M.	75
						Hematemesis		Ticlopidine		
79	Present case	2009	F	70	Ce-EGJ	Sore throat,	(-)	Aspirin	(+)	
					Stomach	Chest discomfort,				
						Hematemesis				

Ce: cervical esophagus; Ut: upper thoracic esophagus; Mt: middle thoracic esophagus; Lt: lower thoracic esophagus; Ae: abdominal esophagus; EGJ: esophageal gastric junction; AGML: acute gastric mucosal lesion; M-W tear: Mallory-Weiss tear; CRF: chronic renal failure; HD: hemodialysis; ITP: idiopathic thrombocytopenic purpura; LC: liver cirrhosis; Af: atrial fibrillation; N.M.: not mentioned; ?: location not specified.

failure in 8 cases (7 cases receiving hemodialysis), 6 cases of cerebrovascular disorder, 5 cases of angina pectoris, 2 cases following heart valve replacement, 1 case of hepatic cirrhosis, and 1 case of idiopathic thrombocytopenic purpura, and the latter 2 cases had the underlying disease with a tendency for increased bleeding. Twenty-seven patients were receiving medications that tended to cause bleeding to treat coexisting conditions (antiplatelet agents, 14 patients; heparin, 8 patients; warfarin, 3 patients; combined antiplatelet agent and heparin, 1 patient; combined antiplatelet agent and warfarin, 1 patient; thrombolytic therapy, 1 patient). Therefore, 27 cases (34.2%) had factors that increased the tendency to bleed. An antiplatelet agent was also being used in the present case. In many patients (33 patients), onset followed eating. Onset was not associated with meals in 12 cases, and was of unknown cause in 34 cases. Among the cases with onset after eating, there were 3 cases, including the present case, in which the possible cause was a fish bone. [36, 48] The present patient drank large amounts of water after ingesting the fish bone, and this might have increased the pressure within the esophagus, possibly exacerbating the hematoma.

Although patients often exhibit hematemesis or melena, bleeding is usually temporary and relatively minor [1, 76]. Subjective symptoms and hematoma generally disappear in 7 to 14 days with conservative treatment using intravenous drips with nothing by mouth but mucoprotective agents. The disorder is, therefore, thought to be a condition with good prognosis [77]. In only 2 reports by Hasebe et al. [9] and Hata et al., [58] has recurrence been reported. In both cases, the size of the hematoma was small in both of the original and recurring ones. In the present case, the hematoma covered a very large area, but the patient recovered steadily with conservative treatment alone, which is in agreement with previous reports. Cases vary substantially from small to very large (such as in the present case); thus, CT scans, endoscopic examination, and gastrointestinal series tests are important in making a differential diagnosis, in addition to evaluation of the lesion.

Among the reported cases in our search, 8 had extensive hematomas reaching from the esophagus to the stomach. Excluding 2 of these cases in which the patient also had Mallory-Weiss syndrome, 4 of the 6 patients were taking medications that caused a tendency to bleed. The submucosal layer of the stomach is denser than that of the esophagus and it is therefore more difficult for the hematoma to extend from the esophagus to stomach. In cases without mechanical damage to the esophagogastric junction, such as Mallory-Weiss syndrome, it is possible that medications resulting in an increased tendency to bleed may be related to extension of the hematoma to the gastric submucosa. In this case, low-dose aspirin might relate to the extension of the large hematoma but probabaly did not with the development of the disorder. Therefore, she started low-dose aspirin again after the recovery and no recurrence has been observed.

In aging societies, people taking antiplatelet agents and anticoagulants, in addition to cases with traumatic factors such as ingestion of foreign objects and endoscopic examination/treatments, are increasing; thus, more attention should be focused on this rare condition.

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