

Six Cases of *Pasteurella multocida* Infection

Shinya TAKANO, Kunihiro OKABE and Hajime ARAMAKI

Department of Otolaryngology, Tokyo Women's Medical University Daini Hospital

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We report six cases of *Pasteurella multocida* infection. Four patients had acute tonsillitis, one had acute sinusitis, and one had sialoadenitis, so acute tonsillitis was the most common presentation. All six patients had no contact with animals.

Introduction

Pasteurella multocida (*P. multocida*) is a gram-negative rod and is one of the zoonoses. Recently, *P. multocida* infection has been shown to cause pneumonia or other respiratory diseases, as well as skin infection following cat bites and scratches. It has been reported that upper respiratory tract infection accounts for 13.7%¹⁾ in the *P. multocida* infections. However, there have been very few reports on *P. multocida* infections and the route of infection in the field of otorhinolaryngology.

Here we report six cases of *P. multocida* infection that were detected in patients seen in the Department of Otolaryngology, Tokyo Women's Medical University Daini Hospital from 1993 to 1998.

Patients

The six cases of *P. multocida* infection included, five men and one woman (Table 1). Four patients had acute tonsillitis, one had acute sinusitis, and one had acute sialoadenitis with sialolithiasis. All six patients had no contact with animals and five out of six were smokers. *P. multocida* was detected using the Oxyfarm tube method. In all cases, the organism was sensitive to the antibiotics listed in Table 2.

Case Reports

Case 1

A 37-year-old man presented to the Department of Otolaryngology at Tokyo Women's Medical University Daini Hospital on February 3, 1995 with a sore throat and fever (38 °C) for 2 days. The past history and family history were not contributory. He smoked two packs of cigarettes daily and had no history of contact with animals.

On examination, the only abnormality was inflammation of the tonsils. Laboratory tests showed a leucocyte count of 10,400/μl, CRP of 1.7 mg/dl, and ASK of 640. *P. multocida* was detected in a swab from the tonsils.

An antimicrobial agent (ciprofloxacin: 600 mg/day) and analgesics were prescribed for 5 days, and his symptoms improved.

Case 2

A 29-year-old man presented on April 20, 1995 with pain in the right cheek, around the eyes, and in the molars, as well as epistaxis and purulent nasal discharge for 1 day. The past history and family history were not contributory. He smoked one pack of cigarettes daily and had no known contact with animals.

On examination, there was pus in the middle meatus of the nose, but no other otorhinolaryngological abnormalities. The right maxillary sinus was cloudy on plain X-ray films (Figure), so max-

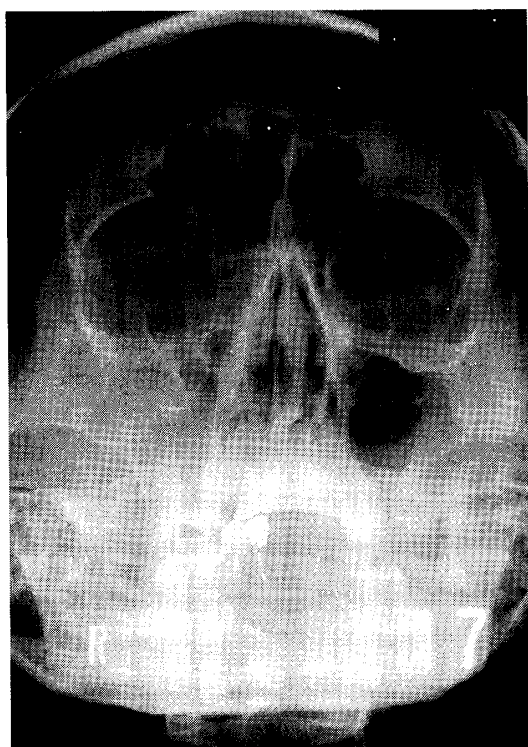
Table 1 *Pasteurella multocida* infection cases

Case	Age	Sex	Chief complaint	Smoking (packs/day)	Contact with animals
1	37	M	Sore throat	2	—
2	29	M	Right cheek pain	1	—
3	19	F	Sore throat	0	—
4	28	M	Pain at submandibular lesion	1	—
5	20	M	Sore throat	1/2	—
6	17	M	Sore throat	1/2	—

Table 2 Antibiotics receptivity in cases

Case	Antibiotics									
	ABPC	PIPC	CTM	CZON	FMOX	AMK	MINO	FOM	IPM	OFLX
1	##	##	##	##	##	+	##	##	##	##
2	##	##	##	##	##	##	##	##	##	##
3	##	##	##	##	##	+	##	##	##	##
4	##	##	##	##	##	##	##	##	##	##
5	##	##	##		##	+	+	##	##	##
6	##	##	##		##	+	##		##	##

ABPC : ampicillin, PIPC : piperacillin sodium, CTM : cephotiam hydrochloride, CZON : flomoxef sodium, AMK : amikacin, MINO : minomycin, FOM : fosfomycin sodium, IPM : imipenem/cilastatin, OFLX : ofloxacin.

**Figure** X-ray film of case 2 (Water's view)

illary sinus drainage and washing (Schmidt's procedure) was done on the same day and a large

amount of pus was released. *P. multocida* was detected in the nasal discharge. An antimicrobial agent (suparoxacin: 300 mg/day) and analgesics were prescribed for 5 days. His antimicrobial therapy was changed to minocycline (200 mg/day) after 5 days, and the Schmidt procedure was done a total of four times. His symptoms subsequently improved.

Case 3

A 19-year-old woman presented on August 29, 1996 with a sore throat and pain on swallowing for 2 days. The past history and family history were not contributory. She did not smoke and had no known contact with animals.

On examination, the only abnormality was inflammation of her tonsils. Laboratory tests showed a leucocyte count of 7,200/ μ l, a CRP of 0.86 mg/dl, ASO of 77, and ASK of 320. *P. multocida* was detected in a swab taken from the tonsils.

An antibiotic (sultamicillin tosilate: 1,125 mg/day) and an enzyme preparation were prescribed

for 5 days and her symptoms improved.

Case 4

A 28-year-old man presented on January 23, 1996 with a left-side submandibular swelling and pain for three days. He was unable to eat because of the pain. The past history and family history were not contributory. He smoked one pack of cigarettes daily and had no history of contact with animals.

On examination, there was a swelling in the left submandibular region and the floor of the mouth. A calculus was seen in the left Warton's duct on plain X-ray films. Laboratory tests showed a leukocyte count of 12,900/ μ l and CRP of 7.32 mg/dl.

The flora of the mouth was incised, the calculus in Warton's duct was removed, and a large amount of pus was released. *P. multocida* was detected on bacteriological examination of the pus.

The patient was admitted to hospital and received cefpirome sulfate (2 g/day) and clindamycin (600 mg/day) intravenously for 7 days, after which his symptoms resolved.

Case 5

A 20-year-old man presented on August 11, 1997 with a sore throat and fever (38.5 °C) for 2 days. The past history and family history were not contributory. He smoked half a pack of cigarettes daily and had no contact with animals. On examination, there was fur on the bilateral tonsils and epipharynx, as well as bilateral cervical lymphadenopathy. Laboratory tests showed a leukocyte count of 21,300/ μ l, CRP of 3.93 mg/dl, and ASO of 39. *P. multocida* was detected in a swab from the tonsils.

He was admitted to hospital and received cefmetazol (2 g/day) and clindamycin (600 mg/day) intravenously for 7 days, after which his symptoms resolved.

Case 6

A 17-year-old man presented on November 16, 1998 with sore throat for 7 days. The past history

and family history were not contributory. He smoked half a pack of cigarettes daily and had no contact with animals. On examination, there was fur on the bilateral tonsils and epipharynx. Laboratory tests showed a leukocyte count of 6,200/ μ l, CRP of 1.45 mg/dl, ASO of 10, and ASK of 160. *P. multocida* was detected in a tonsillar swab.

He was received clindamycin (600 mg/day) intravenously for 2 days, and his symptoms subsequently resolved.

Discussion and Conclusion

P. multocida is part of the normal oral flora in the cat, and contact with this animal is assumed to result in transmission to humans. Skin infection (48.4%) is the most common manifestation, followed by upper respiratory tract infection (13.7%)¹⁾. Although contact with animals was denied by our patients, the source of infection was still assumed to be an animal in each case.

Acute sinusitis caused by *P. multocida* is uncommon, with only eight cases being reported²⁾³⁾, while only five cases of acute tonsillitis have been described by other authors⁴⁾⁵⁾.

All of these patients had no known contact with animals. However there has also been an increase in keeping pets in Japan recently, suggesting that animal bacterial flora such as *P. multocida* may become an important cause of upper respiratory tract infection.

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Pasteurella multocida 感染症の 6 症例

東京女子医科大学附属第二病院 耳鼻咽喉科

タカノ シンヤ オカベ クニヒコ アラマキ ハジメ
高野 信也・岡部 邦彦・荒牧 元

Pasteurella multocida 感染症は、ペット等からの感染が主な感染経路と考えられている。今回我々は 6 例の *Pasteurella multocida* 感染症を経験した。全例で動物との接触の既往がなかった。
