

ASPIRATION AND INGESTION OF FOREIGN OBJECTS IN CLINICAL DENTAL PRACTICE : AN ANALYSIS OF MEDICAL ADVERSE EVENT INFORMATION PUBLISHED IN JAPAN

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Introduction

The potential of foreign body aspiration or ingestion is a health problem in dentistry. In Japan, the number of reports has been increasing even after it was taken up as medical adverse event information that should be shared in the Project to Collect Medical Near-miss/Adverse Event Information 47th report 1 (issued in 26 December 2016) . Therefore, in an attempt to clarify the current state of Aspiration and ingestion of foreign objects in Japan, this study surveyed information on medical adverse event published in Japan to ascertain number of reports by the type of foreign body, site, treatment, etc. .

Methods

Reports from dentists were extracted by case search system on the website of Japan Council for Quality Health Care’s Project to Collect Medical Near-miss/Adverse Event Information. Total number of those reports was 663 (reporting period: 2010-2021). (accessed on 26 January 2023)

Results

Number of reports associated with aspiration and ingestion of foreign body in clinical dental practice was 72 cases, and the results below were obtained.

Table. Characteristics of reports associated with aspiration/ ingestion of foreign body (N=72)					
Variables		Number of reports	Variables		Number of reports/ Median
Year of report	2010	5	Site	Larynx	2
	2011	3		piriform fossa	2
	2012	3		Bronchus	8
	2013	1		Lung	1
	2014	5		Esophagus	7
	2015	7		Stomach	32
	2016	3		Intestine	1
	2017	8		undescribed	1
	2018	5	Management	Endoscopic removal	36
	2019	7		Bronchoscopy	6
	2020	11		Monitoring	6
	2021	14		Others	2
Age of patients	< 20 years old	6	Severity of event	Undescribed	22
	= or >20 years old	66		No disability	39
Inpatient/Outpatient status	Outpatient	62		No potential of residual disability	26
	Inpatient	10		Low potential of residual disability	6
Intervention	nonsurgical intervention	61		High potential of residual disability	0
	surgical intervention	11		Death	0
Foreign bodies	Dental prosthesis/restoration	34	Professional experience (years)	Median (25% -75%tile)	5.5(2-14.5)
	Dental instruments	30		<5 years	32
	Tooth/crown	4		= or >5 years, <10 years	15
	Dental material	3		= or >10 years, <15 years	7
	Gauze	1		= or >15 years	18
Diagnostic imaging	Radiographs	51	Behavior of surgeon	Inadequate checking	28
	CT	8		Misjudgment	25
	Endoscopy/bronchoscopy	4		Failure in observation	21
	undescribed	1		Others	10
Event	Ingestion	56	Human factors	Deficiency of technique/skill	35
	Suspected ingestion	1		Insufficient knowledge	13
	Aspiration	14	Other factors	Others	8
	Unknown	1			21

Conclusions

1. The number of reports has been increasing in recent years, and there were many cases of accidental ingestion or aspiration of dental instruments and materials.
2. The median years of professional experience of the dentist who caused the accident was 5.5 years.
3. As the background of the event, there were many failures in check or judgment, which are factors related to the behavior of the dentist concerned, and deficiency o technique/skill or Insufficient knowledge, which are human factors.
4. The occurrence factors of aspiration/ ingestion of foreign body are diverse, and provide education on preventive measures and treatments is needed.

References

1. Project to Collect Medical Near-miss/Adverse Event Information 47th report. Japan Council for Quality Health Care. 26 December 2016. https://www.med-safe.jp/pdf/report_47.pdf (accessed on 30 January 2023)

Disclosure statement

The authors declare no conflict of interest.