Office-based research: What is the incidence of mumps related hearing loss?

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[BACKGROUND]

Mumps may cause unilateral, or rarely bilateral, nerve deafness, but the incidence has been believed to be quite low (app. 1/15,000 - 1/20,000 cases). Recent reports from regional outbreaks suggest that the incidence might be higher.

[OBJECTIVE]

Prospective office-based research to determine the incidence of hearing loss in children with mumps.

[DESIGN / METHODS]

Survey of 40 pediatric practices (38 private clinics, 2 pediatric departments in hospitals). The study population consisted of patients < 20 years old who were diagnosed with mumps between January 2004 and December 2006. Cases were based upon clinical determination of parotitis (i.e., swelling and pain); and children whose symptoms resolved within 2 days were excluded. Among those from whom written consent could be obtained, parents were instructed to conduct hearing tests by rubing fingers twice daily for two weeks from the first day of parotic swelling . Parent questionnaires were collected and analyzed; when hearing loss was suspected, patients were referred to an otolaryngologist for confirmation of diagnosis.

[Results]

As of September 2006, 6860 children with mumps were enrolled. Seven children were diagnosed with new onset hearing loss; none had been previously vaccinated against mumps virus (table). Hearing loss was severe and did not resolve for all cases.

	Age	Sex	Deafness Onset	Injury side	vertigo
1	7y1m	M	day 3	L	−
2	6y7m	F	day 1	R	−
3	3y8m	M	day 5	L	Day 5
4	7y5m	M	day 3	L	−
5	4y10m	F	day 36	L	−
6	4y7m	M	day 1	R	−
7	7y1m	M	day 4	L	+

[Conclusion]

The incidence of hearing loss in children with mumps is approximately 1/1,000 cases, which is higher than has been previously reported. The actual incidence may be higher given the potentially low detection rates of mild or unilateral hearing loss and of mumps (i.e., if asymptomatic) Since MMR is not currently licensed for use in Japan and the national

health insurance program does not provide reimbursement for the mumps vaccine, publicizing the significant risk of hearing loss may help the public engage the national government in reconsidering its public health policy.