Choking risk among psychiatric inpatients

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Choking is a life-threatening and not infrequent occurrence in psychiatric hospitals. There is, however, little information available about the risk factors or methods to prevent choking. We conducted a retrospective analysis of the 8 patients who had a cardiopulmonary arrest due to choking and received resuscitation at our hospital during the 6-year period from April 2005 to March 2011. The study involved 6 males and 2 females, all of whom were patients with schizophrenia taking antipsychotics orally. They were aged from 56 to 79 (mean ± SD: 69.0 ± 7.5 years), with the duration of illness from 28 to 54 years (39.9 ± 7.9 years). In 6 of the 8 cases, choking was diagnosed immediately on the basis of the situation at the time of cardiopulmonary arrest. In the remaining 2 cases, cardiopulmonary arrest was initially unexplained, and choking was only diagnosed subsequently. Choking was caused by bread in all cases. Tracheal intubation was carried out in all cases and resulted in successful resuscitation, causing no subsequent change in functions compared with the prechoking condition. All 8 patients had been receiving multiple antipsychotics before the event (mean number of drugs used 2.5 ± 0.7), with a total dose level ranging from 600 to 1800 mg/day chlorpromazine equivalents (mean 1113 ± 341 mg/day). Seven of the 8 patients had mild to moderate involuntary movements, and 5 patients were diagnosed with antipsychotic-induced tardive dyskinesia. During the 5-year period before the choking event, 7 of the 8 patients had at least 1 treatment interruption, and some patients had up to 4 interruptions. On average, patients had 2.3 interruptions (mean 2.3 ± 1.2 times) during the preceding 5-year period. Anti-Parkinsonian drugs were used in 6 of the 8 patients with mean dose of 2.6 ± 1.7 mg/day (biperiden equivalents). In 6 patients, hypnotic benzodiazepines had been prescribed at a mean dose of 10.6 ± 9.2 mg/day (diazepam equivalents). Pharyngeal reflex was checked after recovery by depressing the lingual root with a tongue depressor and was found to be was absent in all cases. Six of the 8 patients had frequent abnormal eating behaviors (such as fast eating, hidden eating) before the event. Only 2 of the 8 patients had a history of aspiration pneumonia.

The cases of choking in our study were characterized by a high proportion of male patients, long duration of illness, use of multiple antipsychotics, a history of interrupted antipsychotic use, locomotor disorders (extrapyramidal symptoms and tardive dyskinesia), loss of pharyngeal reflex and abnormal eating behaviors. These characteristic are similar to those reported for a group of Chinese war veterans.1 A history of aspiration pneumonia did not predict choking. Dysphagia induced by antipsychotics has been reported to increase the risk of both aspiration pneumonia and
choking.\(^2\) Aspiration pneumonia arises from microaspiration causing the entry of small amounts of food and oral indigenous microbial flora into the trachea. It is often attributable to silent aspiration, and a major mechanism for its onset is reduction in throat reflex mediated by antipsychotic-induced decrease of substance P.\(^3\) It is not always accompanied by extrapyramidal symptoms. Respiratory arrest in cases of choking is not, however, caused by entry of food into the trachea but by obstruction of the pharynx with food mass. Although choking is a severe complication in long-stay psychiatric inpatients, no major study has been conducted on this kind of event. A multicenter investigation into choking in psychiatric hospitals and guidelines for its prevention is clearly warranted.

**Disclosure**

The author declares no conflicts of interest.

**References**