Perforative Peritonitis Caused by Swallowing of a Complete Denture

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A 91-year-old female with dementia visited the emergency department with complaint of a severe cough. A blood examination showed mild inflammation, and chest X-ray showed no infiltrative shadow (however, a complete denture which had been swallowed was detected at a future date: arrow in Figure 1). Therefore the patient was suspected of having upper respiratory inflammation and was prescribed an antibiotic. She was hospitalized after three days for fever, abdominal pain, and hypoxemia. A physical examination showed that her blood pressure, heart rate, axillary body temperature and oxygen saturation level were 110/57 mmHg, 79 beats/min, 38.1°C, and 89% (oxygen mask 6 L/min), respectively. An abdominal examination revealed rebound tenderness. Her white blood cell count was 9,000/mm³ and C-reactive protein level was 32.44 mg/dl. During computerized tomography, the radiologist detected an extraintestinal saburra and a niveau in the abdominal cavity (Figure 2). This niveau had no relation with either the stomach or the colon. In addition, a complete denture (6.2 cm × 4.2 cm × 1.2 cm) was detected in the rectum (arrow in Figure 3). Based on all of the aforementioned clinical features, the patient was diagnosed to have perforative peritonitis caused by...
swallowing of a complete denture. This complete denture was removed manually by the transanal route. Peritonitis generally requires a surgical operation (laparotomy and intraperitoneal irrigation). However, the patient was an extremely elderly bedridden patient and her postoperative prognosis for recovery was presumed to be poor. Therefore, she was treated with a course of antibiotics and fasting without surgical management. An upper gastrointestinal series after two weeks showed no perforation of the stomach or intestines. The patient started oral ingestion and was discharged 40 days later. Accidental swallowing of foreign bodies frequently occurs in elderly individuals. Coins, dentures, fish bones, and chicken bones are commonly swallowed materials.\textsuperscript{1} Several cases of swallowed partial denture have been reported;\textsuperscript{2,3} however, although the authors searched PubMed and Japan Medical Abstracts Society for cases of a swallowed complete denture, a case of a swallowed complete denture removed manually by the transanal route has never been documented. Ingested foreign bodies longer than 6.0~7.0 cm are believed to be impossible to pass the pyloric part and ileocecal area. Consequently, ingested foreign bodies longer than 6.0~7.0 cm cannot be excreted from the digestive tract.\textsuperscript{4} For example, a large foreign object (cell phone) was not able to be excreted, and had to be removed under endoscopy.\textsuperscript{5} A complete denture is a dull body, unlike a pointed partial denture, thus it was excreted in spite of its large size. Fortunately, the complete denture did not remain in her body. The patient recovered from the perforative peritonitis with no complications including sepsis without surgical intervention.

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References