This 3-year-old girl was admitted to the Seoul National University Children's Hospital (SNUCH) for the fifth time on July 16, 1990, for a surgical intervention. She was born on September 19, 1987 via normal full-term spontaneous delivery with the birth weight of 3.4 kg. The vaccination was done as scheduled. The family history was unremarkable except for her maternal grandmother who had diabetes mellitus and grandfather died of stomach cancer. She had been healthy until June, 1988 (9 months of age) when her meal was changed from breast milk and weaning food to solid food. She experienced episodes of regurgitation and vomiting. The vomiting was intermittent and cyclic, and was not projectile or bilious. However, since her general condition was good the parents did not pay much attention for these symptoms. On August 21, 1988 (11 months of age) she started to run fever with cough, for which she was brought to a local Pediatric Clinic. With the impression of pneumonia she was managed with antibiotics. She developed diarrhea at that clinic, and was transferred to SNUCH. Her first admission was her age of 12 months (September 3, 1988) because of oliguria and diarrhea. After a series of study she was diagnosed to have acute gastroenteritis and sent home 4 days later. Other than hypoalbuminemia (2.4 gm/dl) the lab data remained within normal limits.

Her second admission was on February 22, 1989 because of vomiting. The vomiting started four days before the admission. This time the vomiting was persistent. On admission the patient was an alert girl weighing 9.5 kg. The heart beat was 130 per minute and respiration 24 per minute. Physical examination showed no unremarkable findings. The hemoglobin was 11.3 gm/dl, hematocrit 34.0%. After admission the vomiting did not develop as the food intake was composed solely of fluidy meal. Upper G-I series showed focal symmetrical stenosis at distal portion of the esophagus. Endoscopic examination confirmed the narrowing at 15 cm point from the nares, and there was no mucosal lesion such as ulceration or discoloration.

Her third admission was for the bougienage of the stenotic esophagus on May 31, 1989. On the second hospital day balloon dilatation was carried out, first with 4 mm and then 8 mm. On the next day she could swallow solid food without problem, but the alleviation lasted only one day. Two days later she could only swallow apple juice but not apple residue. Her general conditions, however, remained stationary. During that admission she was found to have harsh pansystolic murmur on the midsternum. She was discharged with fluidy meal and was followed through Out Patient Clinic. On January 2, 1990, she developed signs of general weakness. Diarrhea and oliguria were associated with night fever. She was admitted to SNUCH for the fourth time. After managements with hydration and antibiotics she improved and was discharged.

On June 19, 1990 repeat esophageal dilatation was done with 10 mm balloon. The esophagography 25 days after the second dilatation procedure showed that an ovoid filling defect was still evident. And the effect was not satisfactory. On July 16,