Nutritional treatment (NT) such as EN or PN is essential for the malnourished or long term fasting patients. As NT is usually delivered to complicated, fragile, or acute ill patients, many events can occur during NT. Recently, we conducted one single center and one multi-center clinical studies focusing on NT-related complications.

Firstly, 4,527 cases of NST consultation for adult patients (> 18 years) at SNUH from Jan to Dec 2016 were reviewed. We analyzed the reasons of NST re-consultation according to the type of current nutritional support. NST re-consultation rate was 46.8% (n=2,117). The reasons of NST re-consultations included (1) changes of nutritional provision method (n=1,014, 47.9%), (2) complication related to artificial nutrition (n=700, 33.1%), (3) routine follow-up (n=303, 14.3%), (4) home nutritional therapy (n=80, 3.8%), and (5) others (n=20, 0.9%). Re-consultation rate of enteral nutrition (EN) was 55.7% (988/1,773) and that of parenteral nutrition (PN) was 41.0% (1,129/2,754).

Secondly, we conducted a multicenter trial (supported by KSPEN) regarding NT-related complications in adult, in-hospital patients. We collected 14,600 NT-related complications from 12,453 patients from 28 hospitals. Regarding type of complication according to the type of NT, calorie deficiency (31.3%, n=1,332), diarrhea (22.0%, n=935), and GI trouble except diarrhea (11.9%, n=508) were most common in EN. Similarly, calorie deficiency (55.4%, n=4,236), GI trouble except diarrhea (9.8%, n=750), and electrolyte imbalance (8.2%, n=626) were most common in PN. Regarding clinical outcomes, 18.7% (n=2,158) was finally expired, and 58.1% (n=7,027) was admitted to ICU. Volume overload (OR=3.48) and catheter infection (OR=2.54) were closely associated with hospital death. Hyperammonemia (OR=3.09) and renal insufficiency (OR=2.77) were closely associated with ICU admission.

In summary, NT may induce or be associated with several complications, and some of them may affect patient’s outcome seriously. NST personnel in each hospital should be aware of each problem during nutritional support.