# Department of Internal Medicine Division of General Medicine

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#### **Research Activities**

Division of General Medicine, The Jikei University Hospital

We are attempting to compile a database of our medical examinations and treatments during primary care in outpatient units. The data and information of every outpatient are collected from forms of our own design after being filled out by physicians. The data and information include reason for visiting, symptoms, complaints, whether the patient had consulted other physicians, the primary diagnosis, examinations, and care. This year, the most frequent reasons for consultation were abdominal pain, cough, and pyrexia. The most frequent initial diagnoses were upper respiratory tract infection, infectious gastroenteritis, and headache. The data we compile, especially from initial visits, are expected to be useful for analyzing trends in primary care at large general hospitals.

Recently, there has been a strong desire for a change of focus in medical education, from hospital-based specialty care to primary healthcare, including community healthcare. Thus, we are now planning postgraduate and life-long training programs for physicians to acquire skills for the general practice required in the community.

Division of General Medicine, The Jikei University Katsushika Medical Center

We presented several case reports associated with endocrine diseases: pituitary disease, adrenal disease, thyroid disease, and electrolyte abnormality.

We examined the factors that affected the serum procalcitonin level. Although procalcitonin is used as an inflammatory marker of bacterial sepsis, we examined the association of procalcitonin with thyroid hormones and glucose metabolism. A total of 169 patients in our hospital (24 to 96 years old; 90 man and 79 woman) were divided into 3 groups on the basis of procalcitonin concentration (≥ 2 ng/ml, 33 patients; 0.5-2 ng/ml, 108 patients, and < 0.5 ng/ml, 28 patients). A procalcitonin concentration was associated with increases in C-reactive protein, white blood cells, and neutrophils and a decrease in lymphocytes. We found not association of procalcitonin with thyroidal function, but procalcitonin had strong correlations with blood glucose and HbA1c. *Klebsiella pneumoniae*, *Staphylococcus pneumoniae*, *Escherichia coli*, and *Hemolytic streptococcus* were isolated from blood cultures of patients with procalcitonin ≥ 2 ng/ml. *Campylobacter* and *Candida* were isolated from the blood cultures of patients with procalcitonin < 0.5 ng/ml.

#### Division of General Medicine, The Jikei University Daisan Hospital

## 1. Study of polymyalgia rheumatic

We found that morning stiffness is present in only 30% of patients with polymyalgia rheumatica. A high level of C-reactive protein was found in all patients, and an elevation of matrix metalloproteinase 3 was found in 80% of patients. Mild cases of polymyalgia rheumatica can be treated into remission with 10 mg of prednisolone. We can cure about 50% of cases in this way, but other cases require continuous treatment.

## 2. Study of hyponatremia in elderly patients

Hyponatremia is a common electrolyte disorder in elderly patients. The syndrome of inappropriate secretion of antidiuretic hormone caused by minor stress due to inflammation is the main cause of hyponatremia in elderly patients.

# 3. Study of sepsis

Changes in the white blood cell count and levels of procalcitonin and C-reactive protein have limitations as markers for the early diagnosis of sepsis. We began to measure the new marker presepsin.

## Division of General Medicine, The Jikei University Kashiwa Hospital

Our research in The Jikei University Kashiwa Hospital consists of 4 parts. The first is to develop interprofessional work in Kashiwa. We conducted an open seminar related to general medicine. The second part is to develop educational tasks for teaching medical students and junior physicians. We developed the education system using e-portfolio. Education program concerning medical-professionalism and medical-ethics are running. The third part is to develop the core competency of the Hospitalists in Japan, especially in university hospitals. The fourth part is to establish a system for a Hospital Ethics Committee and Clinical Ethics Consultation in The Jikei University Kashiwa Hospital.