Endocrinology in the era of Anthropocene

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Endocrinology is a relatively young field in medical science, beginning in the late half of the 19th century. The 20th century was characterized by the discovery of numerous hormones, beginning with discoveries of adrenalin by Takamine in 1901 and secretin by Bayliss and Starling in 1902. Starling proposed the concept of hormone and the endocrine system in 1905. Following several decades were characterized by discoveries of hormones or hormone-like substances, among which the discovery of insulin in 1921 was the hallmark of clinical contribution of hormones. Last year, we celebrated a centennial of insulin discovery that has saved a great number of lives suffering from diabetes worldwide.

Since 2019, the world has faced unanticipated pandemic of COVID-19 that has killed more than 6 million people worldwide (by June 24, 2022). Messenger RNA and other types of vaccines have been successfully developed within a short period and successfully used worldwide. Until now, no remarkable endocrine complications of both the disease process itself and vaccination have been reported. We have to watch carefully, however, because some endocrine organs, such as the thyroid and the endocrine pancreas, are vulnerable to infectious agents.

COVID-19 has been considered to be a disease of Anthropocene. The Anthropocene is still an unofficial unit of time, used to describe the most recent period in earth’s history, when increased human activities have very important effects on the earth’s environment and climate. Speed of changes in environment and human activities has been accelerated since the late half of the 20th century. Concomitant with increased human activities during this period, there seemed to occur more emerging or re-emerging infectious diseases such as malaria, hantavirus infection, Nipah virus, and Ebola virus diseases. There is strong evidence that ecological changes have led to increased rates of infectious diseases.

How about endocrine or metabolic diseases in Anthropocene, we still do not have enough data to discuss on this issue. Facing increasing human activities and decreasing natural environment in Anthropocene, we may face an increase of some metabolic derangements. Endocrinologists need to be aware of effects of changing environment on metabolic health and diseases in future.

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Careers in JES
2000– Honorary Member
1997–2000 Senior Councilor
1995–1997 11th President
1991–1995 Auditor
1989–1991 Director (Education and Career Development)
1987–1989 7th President
1966–1997 Councilor
1958– Member
Activities in JES
1988 Chairman, Local Organizing Committee, 8th International Congress of Endocrinology, International Society of Endocrinology
1985 Chair, 3rd Fuji Hormone Conference (JES Summer Seminar on Endocrinology & Metabolism)
1979 Chair, 52nd Annual Congress of JES
1977 Chair, 25th General Assembly of the Japan Endocrine Society Western Regional Meeting

JES Awards
2002 JES Distinguished Service Award

Contributions to EJ
1978–1984 Editorial Consultant