

## **Postgraduate training courses at the School of Dentistry and Public Health in the University of Michigan**

Clinical Fellow, Division of Preventive Dentistry

Sayaka Matsumoto

There was a great opportunity to participate in the educational seminar at the School of Dentistry and Public Health in the University of Michigan 8<sup>th</sup>- 11<sup>th</sup> February 2010. This special seminar was conducted by Dr. George W Taylor (Dr. Taylor) as part of collaborating activities between Niigata University and consisted of both lecture and practice components to improve our academic knowledge and skills in English. Lectured topics were about relationship between oral health and systemic disease, and basic epidemiological study designs and methods. We also had experienced to present our own research topics and had practical discussions with Dr. Taylor and his colleagues. This is a brief report from the seminar programs.

### **1. Dr. Taylor Research Team-Cariology, Restorative Science and Endodontic, University of Michigan**

Dr. Taylor Research Team has focused to evaluate relations between oral and systemic health, particularly periodontal infection and diabetic control and complications. His team has been conducting several epidemiological and intervention research projects, mainly investigate relationship between periodontal disease and diabetes mellitus. Their research field covers not only the United State but also several developing countries.

These studies have been granted by the National Institute of Dental and Craniofacial Research and other foundations.

### **2. Epidemiological and Clinical study in Dr. Taylor team, University of Michigan**

The figure shows past and ongoing research projects that Dr. Taylor Research Team has conducted (Fig 1). Red and yellow draw pins shaped marks pointed at ongoing researches while green and black pointed at completed researches.

#### **1. Completed research projects**

- **Phoenix Arizona**

Longitudinal study had been demonstrated in residents of the Gila River Indian Community from 1982-1989. The findings presented that severe periodontal disease has affected poor glycemic control in type 2 diabetics (1).

- **Puerto Rico and Lexington Kentucky**

Each research was collaborated with University of Puerto Rico and Kentucky University. The results have shown that periodontal disease was linked with gestational diabetes epidemiologically.

## 2. Ongoing research projects

- Augusta Maine

Conduct health services research to evaluate relationship between dental care service utilization and medical care costs for insured individuals who have diabetes.

- New York and New Jersey

Large-sized sample study has demonstrating in four federally-approved community health centers in New York and New Jersey.

The aim of study is to investigate effects of periodontal treatment on glycemic control and diabetes complication in type 2 diabetics (2)

- Lahore Pakistan (located North part in Pakistan)

Conduct a clinical trial on the impact of complete mouth extraction of severe periodontal diseases involved teeth and insertion of implant supported dentures on glycemic control of people with diabetes in Pakistan.

Dr. Taylor is currently principal investigator of the National Health and Nutrition Examination Survey (NHANES), which are NIH-funded research projects. His team has reported several findings that relationship between periodontal disease, diabetes (3) and gestational diabetes (4); relationship between severe periodontal disease including edentulous and chronic kidney disease (5).

Furthermore, his team has co-worked with the US government, several universities and institutions, to support planning study design as well as data analysis.

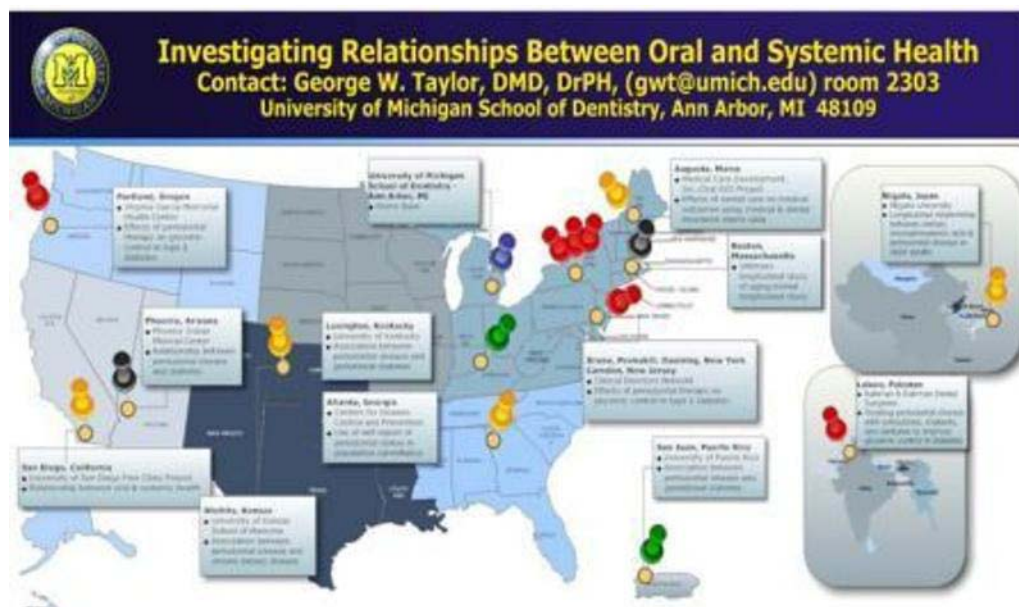


Fig. 1. Epidemiological and Clinical study in Dr. Taylor team, University of Michigan

### **3. Presentation practice in English.**

To practice speaking in English, we have given occasions to make own presentations in front of Dr. Taylor team. Each was given 20 mins for presentation and 30 mins for question & answer.

My presentation was entitled “Effect of periodontal treatment on serum adiponectin in type 2 diabetics”, which was based on the research topic for the degree of PhD.

I also talked about my ongoing study “Relationship between periodontal disease and adiponectin gene polymorphism”.

Though I had an experience to make oral presentation in the IADR conference when I was a post-graduate student, it was my first experience to make longer presentation in English. I got nervous in my presentation, however, Dr. Taylor and his colleagues kindly showed their interests to my paper and gave lots of feedbacks regarding concept and design of my ongoing study. Especially, his advice regarding the interpretation of medical serum markers if adopt to evaluate diabetic as well as periodontal status was quite helpful for data analysis.



Presentation

### **4. Summary**

Though the training program was very short schedule, I learned diverse approaches and ideas for research activities from both of lectures and practices. It was a fruitful opportunity to develop my research skills.

Moreover, discussions with Dr. Taylor and his colleagues brought me some confidences to present in English and encouraged me to have more incentive to work academic research.

I would like to express special my thanks to Dr Taylor and his colleagues.



Classroom lecture by Dr. Taylor

#### Reference

1. Taylor GW, Burt BA, Becker MP, Genco RJ, Shlossman M, Knowler WC, Pettitt DJ. Severe periodontitis and risk for poor glyceemic control in patients with non-insulin-dependent diabetes mellitus. *J Periodontol.* 67, 1085-1093, 1996.
2. Clinical Directors Network, Inc. <http://www.cdnetwork.org/NewCDN/periodontal.aspx>. (accessed 26/04/2010).
3. Tsai C, Hayes C, Taylor GW. Glycemic control of type 2 diabetes and severe periodontal disease in the US adult population. *Community Dent Oral Epidemiol.* 30, 182-192, 2002.
4. Novak KF, Taylor GW, Dawson DR, Ferguson JE 2nd, Novak MJ. Periodontitis and gestational diabetes mellitus: exploring the link in NHANES III. *J Public Health Dent.* 66, 163-168, 2006.
5. Am Fisher MA, Taylor GW, Shelton BJ, Jamerson KA, Rahman M, Ojo AO, Sehgal AR. Periodontal disease and other nontraditional risk factors for CKD. *J Kidney Dis.* 51, 45-52, 2008.