Animal Husbandry, Dairy and Veterinary Science

Review Article ISSN: 2513-9304

Sustaining prevention

Ciampolini M*

Preventive Gastroenterology Unit, Department of Paediatrics, University of Florence, retired, Florence, Italy

Abstract

The Author suggests the reproduction of a Gastroenterology Unit, 4 or 5 people, similar to that he personally directed for over 30 years. One doctor, MD, one nurse and one dietician, all full time engaged in the Unit. I would add a doctor in Physics or Chemistry to increase the objectivity and operate further statistical analyses on findings. The old Unit produced about 100 international articles, hundreds of requests as invited speaker, about hundred awards. Unfortunately, the Unit was suppressed in the year 2000 to give resources to old, established scientists. The Unit is expected to resume the research activity that prof. Ciampolini directed up to the year 2000 and beyond. The cumulated data on excel might be verified, the patients who changed meal pattern and learned Initial Huger Meal pattern (IHMP) might be invited to show habits changes after the learning in the years before 2000. The scientific working of the Unit should maintain an independent position in the prevention of diabetes development and its milestones: functional disorders, vascular diseases and malignancies. International and National Science will evaluate and appreciate the achievements year after year.

Abbreviations: BG: Blood Glucose, an index of energy availability in blood for the whole body, IH: Initial Hunger consists of gastric pangs or mind or physical weakness: *Inedia* is the Italian word for this weakness. In sedentary adults and in children, IH corresponds to 76.6-3.7 mg/dL BG. In infancy corresponds to demand before sight of food, IHMP: Initial Hunger Meal Pattern- Energy intake is adjusted to three arousals of IH per day, OGTT: oral glucose tolerance test, AUC: area under curve of GTT, MBG: The mean of 21 BG measurements before the three main daily meals reported by a week diary. MBG measures the compliance with IHMP, MBG shows changes after training and it is negatively correlated to insulin sensitivity. Below 81.8 mg/dL (Low MBG) MBG indicates a healthy meal pattern in sedentary people. Over 81.8 mg/dL, High MBG is associated with fattening/insulin resistance, NSV: Non-starchy Vegetables, food with lower content than 30 kcal/100 grams

Introduction

The author directed the Unit of Preventive Gastroenterology from the sixties of previous century upto the year 2000. As third-degree reference center, The Unit received diarrheic infants in the second year of life. Most had a transient functional disease that spontaneously regressed [1,2]. A minority developed malnutrition [3], another minority was diagnosed as Celiac disease [4,5]. At that time, the author and all scientific world as well as the Italian group for the study of Pediatric Gastroenterology had a poor knowledge of diarrhea disease. Knowledge of diagnosis and treatment of Celiac disease was accurate and effective. Celiac patients were distinguished by signs of malnutrition and subsequently by measuring antigliadin antibodies and also by measuring transglutaminases.

The Unit conceived diarrhea as a consequence of overgrowth and imbalance in the microbiome [5]. The number of bacterial species that grow in intestine, is about thousands and most do not interact with mucosa. A small number, less than hundred species have an immunogenic role on intestinal mucosa and elicit production of antibodies IgM and IgG as well as cellular inflammation. One or two immunogenic species grow excessively [5-9] as a consequence of long permanence of nutrients in the bowel. The long permanence follows a meal with an excessive energy content or a slowdown of absorption. A slowdown event may coincide with increases in environmental temperature or with parenteral viral infection. Feeding children was designed in the purpose of least bowel bacterial growth and least immune stimulation of mucosa. This strategy suppressed diarrhea relapses [10-12]. This strategy was successful among patients, and in the scientific world. I have received 30 - 60 requests each day to present my findings or send manuscripts for publication. I even had a proposal for directing a Research/Assistance Structure. There are growing expectations from IHMP, prevention of vascular diseases and recently prevention of malignancies [13]. The survival and success of published papers can change the future of many people. We were unable at showing a treatment of cancer by IHMP, we only showed pathogenesis and possibility of prevention. The provided simple evidence and the associate reasoning might convince and orient physician's mind. A physicians' univocal convintion might orient also lay people.

Intervention

The complete strategy may be named as diabetes prevention. It is graded may consist in prevention of functional disorders likediarrhea, abdominal pain and headache or backpain. These are not organic diseases easily and completely reversible. Vascular diseases have only partial regression. Attempts at stop malignancies are scares as far as we know. Malignancies follow alteration of DNA that emerge during replications. Increase in DNA and cell replications are produced by inflammations and an overall inflammation is associated with insulin

Correspondence to: Ciampolini M, Department of Paediatrics, University of Florence, Florence, Italy, Tel: 039055215744; E-mail: mlciampolini@fastwebnet.it

Key words: *blood glucose, diabetes, insulin resistance, overweight, fattening, energy balance, energy intake, limit in energy intake, hunger, meal onset, energy availability, bowel disorders, malnutrition*

Received: November 26, 2018; **Accepted:** December 04, 2018; **Published:** December 07, 2018

resistance and diabetes. Malignancy prevention through decades and entire life coincides with diabetes prevention. Centers for the treatment of diabetes might be organized to this general prevention.

Diabetes centers and malignancies

Although I promoted the creation of antidiabetic centers, I was excluded from these organizations. I had already intense work-days in Pediatric Gastroenterology. The nature of Italian, medical collaboration is generally competitive. A competition among institutes may be useful for general health. Yet competition inside the institute may be ruinous. At the moment, this discussion is useless, it may only begin to show the huge difficulty in constructing health and clinical, objective assessments.

The usefulness of the antidiabetic prevention centers may be obvious. The major difficulty in reproducing a useful center is the point of patient recruitment. 20 years of activity interruption on my side may mean complete dismissal of past teachings. The centers do not need to necessarily regrow in Italy. The author is almost incapable of moving from Florence, yet communications by phone or internet may direct and correct behavior from Florence. Somebody somewhere may be interested to enlarge present assessments and construct around me a laboratory like in the past.

Acknowledgment

The Author acknowledges the indispensable collaboration in writing with David Lowell-Smith (NZ), Riccardo Bianchi (NY) and Stella Zagaria and the strategic, statistical support by Cutberto Garza (Rector, Boston College), Giuliano Parrini (Professor of Physics, Firenze) and Andrea Giommi (Professor of Statistics, Firenze). The here summarized researches were supported by the Italian Ministry of University, Research, Science and Technology grants for the years 1998-2002 and by ONLUS Nutrizione e Prevenzione, Firenze, for the years 2003-2016.

Conflict of interest

No conflicts of interest

References

1. Ciampolini M, Conti A, Bernardini S, Vicarelli D, Becherucci P, et al. (1987) Internal stimuli controlled lower calorie intake: effects after eight months in toddler's diarrhoea. *Ital J Gastroenterol* 19: 201-204.
2. Ciampolini M, Vicarelli D, Seminara S (1990) Normal energy intake range in children with chronic non-specific diarrhea. Association of relapses with the higher level. *J Pediatr Gastroenter Nutr* 11: 342-350.
3. Ciampolini M, Bianchi R, Sifone M (2014) "Initial Hunger" for All? A Study on Undernourished Infants. *J Pediatr Neona Care* 1: 1.
4. Ciampolini M, Bini S (1991) Serum lipids in celiac children. *J Pediatr Gastroenterol Nutr* 12: 459-460. [Crossref]
5. Ciampolini M, Bini S, Orsi A (1996) Microflora persistence on duodenojejunal flat or normal mucosa in time after a meal in children. *Physiol Behav* 60: 1551-1556. [Crossref]
6. Ciampolini M, Marianelli L (1969) Azione dei germi nel tenue. Nota II: E.Coli nel ratto lattante. Studio microbiologico, istologico e biochimico. *Clinic Pediatr* 82: 78-84.
7. Mowat AM (1987) The cellular basis of gastrointestinal immunity. In: Marsh MN (editor) Immunopathology of the small intestine. John Wiley & Sons, Chichester 44.
8. Brandtzaeg P, Halstensen TS, Kett K, Krajci P, Kvale D, et al. (1989) Immunobiology and Immunopathology of Human Gut Mucosa: Humoral Immunity and Intraepithelial Lymphocytes. *Gastroenterology* 97: 1562-1584. [Crossref]
9. van der Waaij LA, Limburg PC, Mesander G, van der Waaij D (1996) In vivo IgA coating of anaerobic bacteria in human faeces. *Gut* 38: 348-354. [Crossref]
10. Ciampolini M (1974) Influence of environmental temperature on intestinal absorption xylose in rats in vivo. *IRCS* 2: 1545.
11. Ciampolini M (1976) Influence of environmental temperature on xilose absorption in man. *IRCS Med Sci* 4: 208.
12. Ciampolini M (1976) Influence of environmental temperature on xylose absorption test in children and adults. *Intern congress Gastroenterology*. Budapest OJPM 1340639
13. Ciampolini M (2018) Subjective Lowering of Preprandial Blood Glucose and Cancer Prevention by Planning and Recognizing Initial Hunger. OJPM.