

Guido Pozza M.D.: a visionary scholar

Franco Folli^{1,2} · Antonio Secchi³ · Ennio La Rocca⁴ · Emanuele Bosi³ · Antonio E. Pontiroli¹

© Springer-Verlag Italia S.r.l., part of Springer Nature 2018

Guido Pozza was born in Milano on March 26th 1928 and passed away peacefully surrounded by his family on November 21st 2018. He obtained his MD from the University of Milano in 1951, at a very young age of 23 and soon after in 1955 he went to the University of Chicago to work and study as a post-doctoral fellow with Prof. Piero Foa', to investigate mechanisms of pancreatic endocrine secretion employing the model of crossed circulation in dogs as well as various forms of pancreatic extracts. These were the limited and very basic "tools of the trade" at the time, pancreatic extraction and cross-circulation between animals [1, 2]. Chicago was a big and dangerous town, and especially the area around the University Hospital was potentially so and he said that you had to keep your eyes open. Beside these dangers, he was enthusiastic of that period in the USA and had considered staying at the University of Chicago, but then decided to come back to Italy because of the failing health of his parents. As planes were very expensive he went and came back by ship. In Milano, he started his own research lab in the Graneli building in the Policlinico, located in Via Francesco Sforza. His experimental work at the time focused on *in vitro* studies of glucose metabolism in adipose tissue. As a clinician at the time he also had an interest in hematology [3], but soon decided to dedicate himself primarily to the study of diabetes and obesity.

Around 1970, he was proposed to leave the Policlinico, Heart of the Milan Medical School and one of the most prestigious schools of Internal Medicine in Italy, to become head of the Department of Medicine and Chairman of Internal Medicine in the peripheral, newly built San Raffaele

Hospital, in the middle of green fields and farms, far from the center of Milano.

This unconventional and courageous decision to move in what was considered at the time in the Academic World, "the middle of nowhere", defines exactly the personality of Guido Pozza.

Guido was intelligent, ambitious, well prepared, mentally independent and strong to the extent that he could take the challenge to move to a small outfit with the dream of turning it into the largest hospital in Milano and Italy. And he was correct. He also realized that he needed to rapidly foster several competencies in other specialties and thus surrounded himself with young collaborators that developed the hematology, nephrology, endocrinology, and cardiology divisions in the new hospital.

Because Guido had a deep interest in diabetes and understanding basic disease mechanisms, he wanted to pursue his interest in understanding the physiology of the islets of Langerhans. While working in Chicago with Piero Foa', there were probably days in which data were puzzling because of the nature of the pancreatic extract and the experimental model.

Since he was an avid reader, he was fascinated by the work of Paul Lacy, who was among the first to isolate islets from rodents. He proposed to Camillo Ricordi, his student at the time, to go to Saint Louis with Paul Lacy and possibly reproduce the results in human pancreas to obtain pure human islets of Langerhans and thus cure type 1 diabetes mellitus. Camillo followed his suggestion, and in Saint Louis developed with others the Ricordi Isolation Chamber. Human islet of Langerhans isolation and clinical transplantation have become available in the following years until now.

In retrospective, it is quite obvious that without the dream of Guido Pozza to increase the general knowledge in the field of the physiology of the islets of Langerhans and the intuition of Camillo Ricordi, Sharp and Lacy, there would be no islet transplantation in patients with type 1 diabetes mellitus today [4–7].

Guido Pozza also understood the need to apply pancreas and kidney transplantation in young patients with type 1

✉ Franco Folli
franco.folli@unimi.it

¹ Dipartimento di Scienze della Salute, Università degli Studi di Milano, Milan, Italy

² ASST Santi Paolo e Carlo, Milan, Italy

³ Vita-Salute San Raffaele University, Milan, Italy

⁴ ASST dei Sette Laghi, P.O. Tradate, Varese, Italy



Fig. 1 The celebration for Prof. Guido Pozza 90th birthday in Ospedale San Raffaele, Milano, Italy on March 26th 2018. He is standing, fourth from the right, holding a glass in his left hand. His right hand is on the shoulder of prof. Valerio Di Carlo, who is sitting

diabetes mellitus that were dying very rapidly soon after starting hemodialysis. He started an active collaboration with Professor Valerio di Carlo and his surgical team to learn transplantation techniques from the Lyon group of Professors Traeger and Dubernard [8].

Guido Pozza was also a systematic clinician. When we were medical students and young physicians under his direction, there were biweekly morning medical grand-rounds to discuss the more challenging cases with other specialists, with 30–40 people in attendance. Lorenzo, his son, told me that his father was very sweet and affectionate. And Guido Pozza was calm and reassuring with patients in his visit and conversation, an extremely personable individual. And at the end of the visit he would urge himself and us to do everything possible and more, to diagnose and cure. And although he was extremely systematic mentally and an avid reader of clinical studies, he urged us to study in detail each case, to possibly get insights for more common forms of diseases. Guido would suggest to each of us the most important articles to read in the *NEJM*, *Lancet* and *Diabetes*, and he called to congratulate each of us for every paper that we published and he considered worthwhile, and receiving his phone call was always a moment of joy.

His life was medicine and medical progress, in particular in diabetes research and treatment, in a career spanning almost 70 years because he worked in the Ethics Committee until two weeks ago (and he was sorry that he missed a meeting because he was not feeling well).

On March 26th, 2018 we organized his 90th birthday party. Happiness transpires in the faces of all of us in the photo (Fig. 1). I think that the only thing missing for Guido that day, was probably a slice of cheese cake that he truly loved from his life in the USA, but is not available in Milano pastry shops.

In closing, thank you from the bottom of our hearts, from all your students, Professor Guido Pozza, for teaching us medicine and inspiring in us the love for medical research in all fields. But most of all, we are indebted to you for transmitting to your students, the urge to always study, do better and believe that nothing in the continuous progress of Medicine is probably impossible, if we strongly desire to achieve it.

Acknowledgements FF, ELR, AS, EB and AEP have no conflict of interest to disclose relating to this article. This obituary was approved by Lorenzo Pozza, the son of Guido Pozza.

References

1. Foa PP, Galansino G, Pozza G (1957) Glucagon, a second pancreatic hormone. *Recent Prog Horm Res* 13:473–503
2. Pozza G, Galansino G, Hoffeld H, Foa PP (1958) Stimulation of insulin output by monosaccharides and monosaccharide derivatives. *Am J Physiol* 192:497–500
3. Pozza G, Valentini R (1965) On a case of nocturnal paroxysmal hemoglobinuria occurring in a splenectomized patient. *Haematol Lat* 8:45–51
4. Ricordi C, Lacy PE, Scharp DW (1989) Automated islet isolation from human pancreas. *Diabetes* 38(Suppl 1):140–142
5. Socci C, Falqui L, Davalli AM, Ricordi C, Braghi S, Bertuzzi F et al (1991) Fresh human islet transplantation to replace pancreatic endocrine function in type 1 diabetic patients. Report of six cases. *Acta Diabetol* 28:151–157
6. Davalli AM, Ricordi C, Socci C, Braghi S, Bertuzzi F, Fattor B et al (1991) Abnormal sensitivity to glucose of human islets cultured in a high glucose medium: partial reversibility after an additional culture in a normal glucose medium. *J Clin Endocrinol Metab* 72:202–208
7. Luzi L, Hering BJ, Socci C, Raptis G, Battezzati A, Terruzzi I et al (1996) Metabolic effects of successful intraportal islet transplantation in insulin-dependent diabetes mellitus. *J Clin Invest* 97:2611–2618
8. Luzi L, Battezzati A, Perseghin G, Bianchi E, Terruzzi I, Spotti D et al (1994) Combined pancreas and kidney transplantation normalizes protein metabolism in insulin-dependent diabetic-uremic patients. *J Clin Invest* 93:1948–1958