

## IN MEMORIAM

### UMBERTO FOX, MD (1943-2004)



In May 2004 in Milan, Umberto Fox, a pioneer in microsurgery and in lymphatic vessels surgery, died suddenly of a heart attack. He was born in Vicenza, in the north of Italy, in February 1943, from a family of distant German origin. He never knew his father, fallen with his plane in an action during World War II, when he wasn't born yet. After the end of high school, he moved to Milan, where he graduated in Medicine and Surgery in 1967. Attracted by surgery, he

started his fellowship with Prof. Edmondo Malan, a pioneer in Italian Vascular Surgery; he was then called to the Surgical Clinic by Prof. Walter Montorsi becoming one of his most brilliant co-workers. Umberto Fox was one of the pioneers in Italy of experimental microsurgery. Using the techniques of this new surgical discipline, he studied several problems connected with organ transplantation: kidney, heart-lung, pancreas transplantation, etc.

Furthermore, he examined closely certain controversial aspects of surgical techniques, refining original methods (kidney and heart-lung transplantation) used nowadays in research laboratories all over the world. Always using microsurgery techniques, he faced some problems in metabolic surgery (intestinal by-pass and porto-caval anastomosis in guinea pigs).

Another of Umberto Fox's fields of interest concerned metabolic surgery, to which he applied himself since 1974 with experimental research and clinical activity. During several stages in the United States, he worked in a close collaboration with Dr. Henry Buchwald, one of the leading exponents of this fascinating new surgical approach to massive obesity and hyperlipidemias.

Another field of Fox's study was the problem of sterility resulting from varicocele. He established a new and original technique of microsurgical drainage of the blood stasis in the enlarged veins of the pampiniform plexus, performing vascular anastomosis between pampiniform plexus and great saphenous vein.

Another field of application of his untiring scientific curiosity was the assistance with ventilation at positive pressure at low frequency with extracorporeal removal of CO<sub>2</sub> in the treatment of acute respiratory insufficiency. He restated the surgical technique of a vascular approach to such patients, and he devoted himself to all surgical problems, also the one concerning the complex reconstruction of long cannulated veins, connected with this original and extremely satisfactory experience.

Since 1986 he dedicated himself to the study, organization and realization of the kidney and pancreas transplantation program in the III Surgical Clinic of the University of Milan. Due to his personal interest in this field, 15 pancreas and kidney transplantations were performed up to 1990. After becoming director of the Department of General Surgery at the “Santa Corona Hospital” in Garbagnate Milanese, situated just outside of Milan, Fox dedicated himself particularly to hepatic surgery, developing resective and palliative surgical techniques (alcoholization and thermoablation).

In the last years of his work, Umberto Fox was mainly engaged in the study of the pathophysiology of the lymphatic system. He improved experimentally and practically the procedures of lymphovenous anastomosis in cases of lymphedema. Always looking for new treatments, he traveled to China where he noticed the efficacy of thermotherapy in the treatment of lymphedema. For this purpose he tuned up a machine for heating the limbs up to 42°C by microwaves, which he activated in his Hospital Department. He reported many times about his good results he obtained by using this machine. Another important scientific contribution were his studies about the pathophysiology of intestinal lymphatic transport.

Umberto Fox published 160 original papers in national and international journals.

He received many national and international awards. He was:

- honorary fellow, 2nd Faculty of Medicine of the Shanghai University (China);
- foreign corresponding fellow, Sociedad Paraguaya de Flebología y Linfología;
- visitante distinguido de la Facultad de Ciencias Médicas dell’Universidad Nacional de Córdoba (Argentina);
- honorary fellow, Romanian Society of Angiology;
- regular member, Colegio Argentino de Cirugía venosa y linfática;
- fellow, Directive Council of the International Microsurgical Society;
- member, International Society of Lymphology Executive Board, 1993-97;
- fellow, Editorial Board of the “European Journal of Lymphology and related problems” (Belgium);
- fellow, Directive Council of the Italian Society of Microsurgery;
- fellow, Directive Council of the Italian Society of Lymphangiology;
- fellow, Directive Council of the Mediterranean-Latin Chapter of the International Society of Lymphology.

Organizer and President of the 18th GEL Congress, which took place in Milan in May 1993, he was then required to organize the 2000 edition but he had to give up, owing to the initial symptoms of post-hepatic cirrhosis, which led him to liver transplantation in November 2004. He had brilliantly recovered from the operation and started again to operate with his usual enthusiasm and skill. A sudden myocardial infarct stopped his life when he was only 61 years old.

**Raul Mattassi, MD, PhD**  
**“G. Salvini” Hospital**  
**Vascular Surgery**  
**Viale Forlanini, 121**  
**20020 Garbagnate Milanese**  
**Milan, ITALY**