

Editorial

The role of women throughout the history of Nephrology[☆]

El papel de la mujer a lo largo de la historia de la Nefrología

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Throughout the existence of mankind, the task of caring has been the responsibility of women; outside the family unit, the first female carers were the shamans. However, history does not accurately reflect this role, given that medical texts have mostly been written by men. Metrodora (c. 200–400 CE), whose identity is unknown beyond her name, was a Greek physician and author of the oldest medical text known to have been written by a woman, *On the Diseases and Cures of Women*, which made decisive contributions to the aetiology and symptomology of diseases, and was widely referenced by other medical writers in ancient Greece and Rome, as well as in mediaeval Europe.¹

Despite this background, when medicine became a university science, women were excluded, and it was not until the end of the 19th century that degrees in Medicine were awarded, very occasionally and with great uproar, to women for the first time. The first woman to achieve a degree in Medicine was Elizabeth Blackwell, of British origin, from New York's Geneva Medical College in 1849. In 1864, the African-American Rebecca Lee Crumpler graduated from Boston University. Almost 20 years later, in 1882, the Elena Maseras of Catalan origin, achieved a degree in Medicine, although she ended up working as a teacher due to the bureaucratic obstacles she faced in order to practise medicine. Women also

graduated in genetics, physiology and histology during this period, but it would not be until the mid 20th century that the rewards of women arriving into the world of research would come to light.² In this regard, Rosalyn Yalow, a medical physicist and winner of the 1977 Nobel Prize in Physiology or Medicine for developing the radioimmunoassay technique, stands out.

Nephrology is a recent speciality, which was not formally recognised until 1969 or independently recognised until 1977. Therefore, publications specific to this field came later than those for other specialities. In his article, "History of Nephrology", Dr Julio Botella said: "The word nephrology did not yet exist, but there was an explosion of new knowledge in the kidney field; the world had been filled with kidney specialists"³ or, as explained so well by Dr Luis Hernando: "Up to 1950, the history of Nephrology for the most part it was referring to renal physiology, histology and renal radiography. Then a gradual increase in scientific and technological advances occurred which managed to prolong the life of many kidney patients and which now make up the actual content of the history of Nephrology".⁴

The contributions made by many American women to renal physiology between 1918 and 1960 were not recognised until 1999: Marian Minor Crane, Anna Josephine Eisenman,

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Pauline Merritt Hald, Lois L. MacKay, Grace Medes, Gladys Cameron, Alma Elizabeth Hiller, Phyllis Adele Bott, Murial Combes MacDowell and Margaret Mylle.⁵

Internationally, in an attempt to highlight the work of women in the scientific field, the International Society of Nephrology (ISN) wanted to pay tribute to women who had collaborated closely in the development of the speciality⁶:

- Dr Josephine Briggs, responsible for research at the US National Institutes of Health in the 1990s on the renin-angiotensin system, diabetic nephropathy, blood pressure and the effect of antioxidants in kidney disease.
- Dr Renée Habib (France), a pioneer of nephropathology in Europe. She worked with the founders of the ISN to establish nephrology as a speciality.
- Dr Vidya N Acharya, the first female nephrologist in India inspiring the study of kidney diseases, dedicating her research to urinary infections and heading a Nephrology department in Mumbai.
- Dr Hai Yan Wang, head of department and professor of Nephrology at the Peking University First Hospital since 1983, president of the Chinese Society of Nephrology and editor of Chinese and international nephrology journals.
- Dr Mona Al-Rukhaimi, co-president of the ISN and leader of the working group on the KDIGO guidelines in the Middle East, as well as a participant in the Declaration of Istanbul on Organ Trafficking and Transplant Tourism.
- Dr Saraladevi Naicker, who created the first training programme for nephrologists in Africa and the Kidney Transplant Unit at Addington Hospital.
- Dr Batya Kristal, the first woman to lead a Nephrology department in Israel and founder of Israel's National Kidney Foundation. She conducts her current research in the field of oxidative stress and inflammation.
- Dr Priscilla Kincaid-Smith, head of Nephrology at Melbourne Hospital, where she promoted the relationship between hypertension and the kidney and analgesic nephropathy. The first and only female president of the ISN, she empowered many other women, including the nephrologist Judy Whitworth, chair of the World Health Organization committee.

In the early stages of Spanish nephrology, there were no female nephrologists until the end of the 1970s, in a much lower ratio than men, at almost 20:1. Among those who deserve a mention and who, as Luis Hernando said, "We must not forget",⁴ the following women stand out:

- Dr M. Teresa D'Ocón Asensi, the first female head of the Nephrology Department at the Hospital San Carlos in Madrid since it was founded in 1962 and designer of a conservative prosthesis of the peritoneal catheter tract based on urological plugs. She was the only female member of the board of directors of the SEN (*Sociedad Española de Nefrología* [Spanish Society of Nephrology]) since its formation in 1964, until 1976. Women were not represented again in the management of the Spanish society until 1987, with the figure of Dr M. Dolores Jarillo Ibáñez (1987-1993). No further females were present until the beginning of the new millennium.

- Dr María Teresa González, creator of the first nephrology and diabetes clinic at the Hospital de Bellvitge, in 1978.
- Dr Dolores Prats, who promoted peritoneal dialysis and studies on permeability and duration of the peritoneal membrane at the Hospital Clínico in Madrid. She succeeded her female predecessor as head of department, following said predecessor's death in 1981.
- Dr Ana Gonzalo Fondona, who performed the first studies on complement activation in glomerulopathies at the Hospital de Bellvitge.

Two women also had a significant presence in these early stages: Isabel Entero, creator of the Fundación Renal Íñigo Álvarez de Toledo, founder of ALCER (*Asociación para la Lucha Contra las Enfermedades de Riñón* [Spanish Association for the Fight Against Kidney Diseases]) in 1976 and participant in the Transplant Act in 1979, and Dr Blanca Miranda, who replaced Isabel Entero as director of said Foundation from 1982, formed part of the drafting committee of the journal *Nefrología* from 1995 and coordinator of the Spanish National Transplant Organisation between 1996 and 2004.

The journal *Nefrología*, which was created in 1981 by Dr Luis Hernando, did not include women on the editorial board until 1989: Dr Nieves Gallego, Dr Emma Huarte and Dr Dolores Jarillo, out of a total of 35 participants.

However, in the history of Spanish Nephrology, before the emergence of the first female nephrologists, women were represented in nursing, which was fundamental in the opening and functioning of dialysis units throughout Spain in the period from 1960 to 1980. In 1976, they became formally associated, founding the Spanish Society of Nephrology Nursing (*Sociedad Española de Enfermería Nefrológica*, SEDEN), which held its first meeting in Torremolinos in 1978. The board of directors was made up entirely of women: the president, Alejandrina Lorenzo Ruiz (Madrid); the vice-president, Rosa Lavari Astiz (Bilbao); the secretary Josefina Puig Colomé (Barcelona) and the treasurer Montserrat Serasols (Málaga).⁷ Since its creation, they have composed the newsletter of the Spanish Society of Nephrology Technical Health Assistants (*Boletín Informativo de la Sociedad Española de ATS de Nefrología*, BISEAN), issued quarterly, the editorial board of which is also made up entirely of women: Josefina Andujar, Carmen Navarro, África Rodríguez, Josefina Ruiz, Paloma del Olmo and Sagrario Guerra. This newsletter gradually evolved to form the current *Revista Española de Enfermería Nefrológica* [Spanish Journal of Nephrology Nursing].^{8,9}

Currently, women have a growing presence in the medical profession and in this speciality, both internationally and in Spain, and their representation has risen from 34.5% in 1996 to 43.6% in 2007.¹⁰ This presence is reflected in the number of members in the SEN, hospital staff and doctoral theses, where the figure has now risen to at least half of the workforce. Nevertheless, their participation in research, teaching and, in particular, management activities, continues to be lower, having not yet managed to get themselves onto an equal footing with the male gender.

In research, women are represented in 34% of basic or experimental research in nephrology and 22% of clinical research.¹¹ This lack of women working in clinical research,

according to Pilar Arrizabalaga, a first-generation nephrologist and author of various publications in the field, is the result of factors stemming from the different social roles among men and women, the weight of women in the family sphere and the greater difficulty in finding a balance between personal life and academic nephrology,^{12,13} and not only the difficulties that motherhood itself generates for women.¹⁴ Finding a balance between both aspects still requires much better awareness and practice in hospital, university, government administrations and within society itself. Men usually hold leadership positions.¹³ However, it is true that we are witnessing positive social development in this area, and in 2014 the first female president of the SEN, M. Dolores del Pino, was elected.

Dr Alfonso Palma has witnessed the development of the Nephrology and the increasingly greater role of women in the speciality: “When students would come to ask me about the speciality after sitting their Internal Medical Resident exam, the men always asked me if you could earn money working in nephrology, but the women never asked about this, they had more of an interest in the patient. Nephrology is an unusual speciality because it requires a great deal of effort, a lot of dedication, a lot of studying, a lot of work... and it is not very well paid. Kidney patients consume you. If they die under your care it leaves a huge mark on you and this is something that a lot of people can't tolerate, although women can”.

It would be extremely difficult to collate each and every one of the female protagonists in this history, which continues into the present and includes an increasing number of admirable women whose voices are heard. Together, these women form an extremely long list of both Spanish and international women, and we cannot honour them by naming them all. In Nephrology, if we were to name but a few of these outstanding women, it would be worth highlighting: Agnes Fogo and Vivette D'Ágati (nephropathology), Gabriela Moroni and Liz Lightstone (lupus), Sharon Moe and Teresa Adragao (vascular calcification), etc.

This text is not conclusive. Many women have succeeded in improving the quality of life and life expectancy of kidney patients, making new diagnostic and therapeutic techniques available, facing difficult red tape and supporting kidney patients in their daily lives. However, they go down in history only in memory and not on paper. Hence the importance of recounting history from all its sources, as only acts brimming with equality will have an impact on the fair involvement of women in clinical practice and research.

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