## V. Shanta (1927–2021)

Nothing but death is inevitable in the biological world. Dr V. Shanta, an outstanding oncologist and Chairperson of the Adyar Cancer Institute, Chennai was no exception. She was rushed to a private hospital after complaining of chest pain at about 9 pm on 18 January 2021. It is reported that she wanted her treatment at the Cancer Institute itself which had been her home as well, but her colleagues and friends rushed her to a private hospital with facilities and experts to treat cardiac problems. However, her arterial block was too massive to be treated effectively; so her end came shortly before 4 am on 19 January 2021.

Shanta was born on 11 March 1927 in Mylapore, Madras (now Chennai) into a distinguished family that included two Nobel laureates: C. V. Raman (grand uncle) and S. Chandrasekhar (uncle). Obviously she had the genetic potential to become an outstanding physicist, but she chose to study medicine with specialization in obstetrics and gynaecology, and became a medical oncologist.

Shanta did her schooling from National Girls High School (now Lady Sivaswami Ayyar Girls Higher Secondary School) and did her pre-medical study in Presidency College, Chennai. She joined the Madras Medical College and received her M.B.B.S. degree in 1949. Then she did a diploma in obstetrics and gynaecology (DGO) in 1952 and MD in obstetrics and gynaecology in 1955. Yet, she did not join the profession in this field of medicine, although she was selected to the post of Assistant Surgeon at the Women's and Children's Hospital, Madras Public Service Commission. Instead, she joined the non-governmental Cancer Institute which was set up in 1954 by the Women's Indian Association Cancer Relief Fund under the leadership of a medical pioneer Muthulakshmi Reddy. At the Cancer Institute where the late S. Krishnamurthy was her senior and mentor, she marked nearly 67 years of dedicated service to the Institute and to several thousands of cancer patients, particularly from the poorer and deprived sections of society, not only from the southern parts but throughout India.

When Shanta joined the Adyar Cancer Institute, it was a small, 12-bed cottage hospital with a single building, minimal equipment and just two doctors, viz. Krishnamurthy and herself. For three years, she worked as honorary staff until the Institute offered to pay her Rs 200 per month and residence within the campus. She moved into the campus on 13 April 1955, and remained there until her death.



Shanta's pre-occupation with the Cancer Institute, providing state-of-the-art treatment at low cost (and free to those who could not afford it at all), emotional care of the patients during and after treatment, collecting funds for development of the Institute and adding modern treatment facilities compelled her to live on the campus itself. It was a  $24 \times 7$  service to cancer treatment and also importantly for cancer prevention. She strongly believed and supported cancer research with the dictum 'Today's research for tomorrow's treatment to cure cancers'.

P.C.K. recalls an incident in 1995/96 at the Office of the Chairman, Atomic Energy Commission, Mumbai. Krishnamurthy (the then Director of the Cancer Institute) and Shanta were present at the meeting to discuss the grant-in-aid by the Department of Atomic Energy, Government of India to the Cancer Institute. R. Chidambaram, Chairman of the institute had called a few experts to review the progress made and possibilities for further support with regard to hyperthermia plus radiotherapy. The issue was specifically about hyperthermia using Japanese magnetron oscillator and gamma irradiation to enhance the efficacy of cancer radiotherapy. P.C.K. was present in his then capacity as Director of the Bio-Science group, BARC, Mumbai and a radiobiologist. Questions raised by some of the experts were admittedly more in

the realm of mechanisms than the treatment outcome. Greatly upset by this, Krishnamurthy became angry and almost decided to quit. P.C.K. politely told the expert concerned that the S-phase cells in cancer cell mitosis are greatly inactivated by hyperthermia (heat), and the M- and G<sub>1</sub>-phase cells by ionizing radiation need lot more studies. Nevertheless, the Japanese oncologist and radiotherapists greatly recommended a combination of hyperthermia with radiotherapy. Following this statement, Shanta intervened to mention that questions on as yet unclear mechanisms should be discussed among experts, and not put to radiotherapists who strictly follow the protocol given by the scientists. The decision was in favour of the Cancer Institute.

Shanta was not just an eminent oncologist, and cancer surgeon, but a crusader who revolutionized cancer treatment and integrated it with emotional support to the cancer patients. For her, connecting with patients was as important as the treatment. As is the irrefutable situation today, many patients even from the upper middle class cannot afford treatment at some of the specialist cancer hospitals. Thousands of patients from the poorer and under-privileged sections of society accept to live with the disease until death relieves them of pain; however, the Adyar Cancer Institute was always wide open to embrace them with emotional attachment, and provide state-of-the-art treatment. As Gautami Tadimalla (actress, cancer survivor and Founder of Life Again Foundation) rightly observed that Shanta took efforts to provide affordable cancer treatment for all (Chennai Times, 20 January 2021). In fact, several cancer patients from all over India rush to the Adyar Cancer Institute for getting the benefit of best treatment with no or negligible cost. Thanks to a few munificent individuals, buildings were put up in Adyar, Chennai, to accommodate the patients and their kin coming from various parts of the country. These provide inexpensive shelter and food. Paving tribute to Shanta. Ranga Kumar (founder of Sanctuary, an emotional support group for cancer patients and their families) states that 'even at 93, she would still come to OP and see the patients'. Her whole life revolved around the Institute and patients. The large room

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on the first floor where she lived was filled with books. Another cancer survivor and counsellor, Neerja Malik observes that Shanta's patience while listening to people and the lingering smile on her face will always be remembered. Another remarkable thing about Shanta was that she was always accessible. No doubt that she combined compassion for patients and fighting spirit to conquer cancer.

The lockdown due to the COVID-19 pandemic was a major concern to Shanta since many sick people could not be treated and also that early diagnosis so essential for curative therapy would become extremely difficult. So, she started looking for various safe options to reopen the cancer diagnosis and treatment services. In a career spanning about 67 years, Shanta was an advocate of early detection of cancer and the need to change public perception of the disease, especially the extreme fear and hopelessness associated with it.

Almost single-handedly, Shanta has made the Cancer Institute a globally recognized, nationally proud institution with about 600 beds, an internationally acclaimed research group, a college of oncological sciences and a preventive oncological division. In a world where 'cancer' means requirement of huge amounts of money for treatment, the Institute provides state-of-the-art treatment for all. About 40% of the patients are treated free. Over 16,000 new patients and about 141,000 follow-up cases are treated annually.

The compound wall of the Cancer Institute are adorned with posters highlighting that cancer is caused by tobacco, and how prevention is better than cure. These reassuring posters that cancer is indeed curable 'when detected early', attract the attention of every passerby. Their beneficial impact is immense.

The Hindu (20 January 2021) cites one of Shanta's communication, 'The Cancer

Institute has survived crises and come through stronger. Through all the difficult times, we never lost sight of our vision of top quality service to all, particularly the economically weaker sections'. Asked about the challenges in cancer management today, she said it was early detection and prevention.

Shanta's keen interest in research in cancer is evident from her notable number of scientific publications. Shanta was elected Fellow of the National Academy of Medical Sciences and recipient of the Padma Shri award in 1986, Padma Bhushan in 2006 and Padma Vibhushan in 2016. She had received the Ramon Magsaysay Award in 2005 and dedicated it to her Institute. The award citation aptly describes Shanta's dedicated service in the following words: 'In an era when specialized medical care in India has become highly commercialized, Dr. Shanta strives to ensure that the Institute remains true to its ethos, "service to all". Its services are free or subsidized for some 60 percent of its 100,000 annual patients. Eighty seven year old Shanta still sees patients, performs surgery and is still on call twenty four hours a day'.

Shanta served on several national and international committees. She was on the World Health Organization's Advisory Committee on Health. She was also a member of the Tamil Nadu State Planning Commission for Health. She has been Chairperson of Indo-US Collaborative Group on Lymphoid Neoplasias (Indian Chapter), member of many ICMR Committees, President of the Indian Society of Oncology (1988–1990), President of the 15th Asian and Pacific Cancer Conference (1999), and several others.

Shanta was awarded D.Sc. in 1998 by Shri Venkateswara University, Andhra Pradesh for her outstanding contribution in the field of medicine. In 2002, the Dr M.G.R. Medical University awarded her D.Sc. In 2002 in Brussels, she received the Nazli-Gad-El Mawla Award for cancer control in a resource-poor country. In 2013, she received D.Sc. from Dr NTR University, Andhra Pradesh and also Sathyabama University, Chennai for Lifetime Achievement.

If there is an epitaph for Shanta, the inscription would appropriately be that she epitomized cancer treatment to be holistic with 'patient care' being all pervasive. She is reported to have said that 'Professors don't talk to their students much about patient care, morality and ethics' (The Hindu, Magazine Section, 31 January 2021). An anecdote mentioned in the same paper is, how a young patient from Ooty was dying of cancer and pleaded with Shanta 'mother, mother, hold my hand, I am afraid of darkness'. She sat with him the whole night holding his hand and he passed away in the morning.

Shanta believed that the physician's role went beyond treatment. 'The physician has to be not just a doctor and give treatment, but also care and become part of the family. In the end, when the people are dying, they don't want anything, they only want someone to take care of them'. It is this philosophy and practice which made Shanta truly an angel among oncologists, cancer surgeons, and radiotherapists. Shanta was one of our foremost cancer specialists. Her contributions to cancer control are phenomenal. We owe to her our deep sense of gratitude in freedom from cancer. Let us pray that our country becomes a leader in cancer therapy.

May her soul rest in peace.

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