**DR. SUBODH MITRA (1896-1961) - A VISIONARY OF CANCER TREATMENT AND RESEARCH IN INDIA**

Dr. Subodh Mitra, one of the chief architects of cancer treatment and research in India, was a skilled surgeon, an erudite scholar and a dedicated social worker. He established two cancer institutes Chittaranjan Cancer Hospital (1950) and Chittaranjan National Cancer Research Centre (1957) in Calcutta. Dr. Mitra made significant contribution in Obstetrics & Gynaecology, cancer surgery and radiobiology of cancer. He developed a new technique for surgical management of cancer of the female genital which became known and practiced worldwide as Mitra's Operation.

**Key words:** Subodh Mitra, Oncologist, Mitra's Operation, Chittaranjan Cancer Hospital,

Dr. Subodh Mitra, an illustrious son of Bengal was chief campaigner in the crusade against cancer with a missionary zeal and a pioneer in the field of Oncology in India for which he will forever be remembered by the Oncologists and Biomedical Scientific community of the country. Dr. Mitra had founded the Chittaranjan Cancer Hospital (CCH) and Chittaranjan National Cancer Research Centre, Calcutta, the second in line to the Tata Memorial Cancer Centre of Bombay.

It is a sad state of affairs that the life and work of Dr. Subodh Mitra has not been documented properly although an effort was made during his birth centenary in 1996-97. It is therefore a responsibility to recapitulate, research and record the contribution of Dr. Mitra to the development of cancer treatment and research in India for historical reasons as well as to inspire Oncologists of future generations.

Mother Teresa Mc while remembering Dr. Mitra wrote during his birth centenary “……..we recall with great love and gratitude the wonderful works of love he has rendered to sick and suffering humanity …”. Glowing tributes were paid to Dr. Mitra by many others. Dr. V. Ramalingaswamy, who was the Director General of Indian Council of Medical Research (ICMR) and Professor Emeritus of All India Institute of Medical Sciences, New Delhi had remarked “The Subodh

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Mitra’s Operation had justly brought him and the country both name and fame here and abroad. But his contribution to the advancement of Health of the women is much larger in size than the operation. He was a crusader with bold and imaginative ideas and expressed them fearlessly”. He also recalled the “warmth of his friendship and our working together when I was with the ICMR”. Dr. J.Jussawalla, another contemporary towering personality in the field of cancer research and control in this country, had appealed that “medical Scientists and Clinicians working in the Oncology field should try and emulate the activities undertaken by Dr. Subodh Mitra in his life time”.

**Education and Training:**

Born on November 1896 at Narail town of Jessore in undivided Bengal (now in Bangladesh), young Subodh completed his schooling in Jessore and came over to Calcutta to join the Bangabasi College. On completion of the Interscience course (1914) he got admitted to the Calcutta Medical College from where he obtained the M.B.B.S. degree in 1922. His academic brilliance provided him the much needed scholarships to see him through the financial constraints he was in during his student life.

The enthusiastic and indomitable medical graduate moved out to Europe, which was at that time the doyen of medical sciences, to improve his skill and expand his horizon. After receiving the M.D. degree of Berlin University in 1924, Dr. Mitra proceeded to UK for further specialization. He was conferred the FRCS of Edinburg (1924) and MRCOG of London (1925).

**Professional Assignments:**

On his return to India, Dr. Mitra joined the Carmichael Medical College Hospital (the present R.G.Kar Medical College & Hospital), Calcutta as Assistant Superintendent & Resident Surgeon in 1926.

This was a period of nationalist movement and struggle for freedom from British rule. Apart from the political activities the atmosphere was charged with nationalistic emotions which was infusing important social and educational developments. Deshbandhu Chittaranjan Das (1870 – 1925), a leading national leader from Bengal was a great social reformer and philanthropist. Deeply moved by the appalling condition of the poor countrymen he undertook innumerable altruistic ventures for social and political causes. One of his ardent desires was to
set up a hospital complex to alleviate human suffering from diseases by providing
the much needed health care for the womenfolk in particular. He dedicated all his
personal property to set up a Trust for the purpose and even donated his residential
house and its premises for his conceived health care centre in 1924. The Trust
was also meant for education and religious purposes and to support economically
backward people who had often flocked to him at times of distress. The personalities
named as trustees were Bidhan Chandra Roy, Nalini Ranjan Sarkar, Tulsi Charan
Goswami and Nirmal Chandra Chunder who were known as the “Big Five” of
the Congress Movement of Bengal at that time. Unfortunately the Deshabandhu
passed away prematurely at the age of 55 and his desire so close to his heart
remained unfulfilled. As a fitting tribute to this patriot, with the initiatives, drive and
guidance of Mahatma Gandhi, this Trust was further enriched after his death with
generous contribution from his beloved countrymen and named as Deshabandhu
Memorial Trust (DMT).

Under the auspices of DMT a maternity hospital was founded in the
historical building donated for the purpose by Deshabandhu. This hospital,
Chittaranjan Seva Sadan (CSS) was opened by Pandit Motilal Nehru on April
14, 1926 (1st of Baisak 1933, a Bengali New Year Day) and formally inaugurated
by Mahatma Gandhi on January 2, 1927.

Dr Bidhan Chandra Ray – a legendary physician and a patriot, who
became the first Chief Minister of West Bengal in independent India – was
professionally associated with the Medical Colleges of Calcutta. With his acumen
for identifying talent, Dr Ray spotted young Subodh at Carmichael Medical College
Hospital and persuaded him to join the newly established CSS, as he was in
search of committed and zealous professionals to establish CSS on a solid
foundation. On his request Dr. Subodh Mitra took charge as Resident Surgeon
Superintendent in 1927.

Dr. Subodh Mitra - the Founder of Chittaranjan Cancer hospital (CCH)
and Chittaranjan National Cancer Research Center (CNCRC).

Dr. Subodh Mitra soon made his mark as a surgeon, gynaecologist as
well as an excellent organizer which earned him both love and respect from his
colleagues and patients alike. His professionalism embedded with dedication and
compassion made him a favourite of Dr.Bidhan Chandra Ray (Fig. 1). Subodh in
turn helped to transform CSS into the foremost maternity hospital of the region
within a short span. He and his colleagues also started treating female patients
who were diagnosed with cancer of the genitals. Dr. Mitra was deeply moved by the pain and agony of these ignorant and unsuspecting women and had the foresight to realize the need for a speciality hospital for not only their treatment but for a comprehensive center for treatment and control of cancer which was not readily available in the country at that time and only a fortunate few could afford the expensive treatment abroad. Largely due to his insight and initiatives the movement for setting up of institutes for cancer research and treatment gathered momentum which spread through the country.

Dr. Mitra started aspiring for a cancer hospital in the same premises as the CSS where he was working. This concept matched the programme of a complete hospital complex envisaged by the Deshabandhu. Soon Dr. Mitra conceptualized a project and started saving Rs.100/- per month from his paltry salary to form a fund to provide the seed money to get started. When it had grown to a fair amount, Dr. Mitra approached Dr. Bidhan Chandra, who was the Secretary of the CSS and a Trustee of the DMT with a definite proposal in 1940.

While the Tata Memorial Trust had already set up a Cancer Hospital at Bombay in accordance with the wishes of Sir Dorabji Tata in 1941, Dr. Mitra had to wait till 1950 to be able to realize his dream.
With the active and sustained inspiration and support received from Dr. Bidhan Chandra Ray, generous donations pouring in from all quarters and collective help from like minded colleagues, work got started and executed with speed and perfection under the leadership of Dr. Subodh Mitra. The hospital, second of its kind in the country, eventually emerged and in dedication to the memory of the Deshabandhu was named Chittaranjan Cancer Hospital (CCH). The Foundation Stone was laid by Dr. Bidhan Chandra Ray, the Chief Minister of West Bengal on 22nd Jyaistha 1355 (B.S.).

Many of Dr. Mitra’s associates had recalled the way he treated his affluent patients for free and persuaded them to donate generously for the cause of the hospital. Thereby he was able to collect spectacular amount of fund needed for the building and the most modern equipments. He met the Prime Minister of India Sri Jawaharlal Nehru to inform him about this cancer hospital that was coming up. Thinking that this enthusiastic young man from Calcutta called on him for monetary help, the PM said “Sorry Doctor, I cannot promise you any financial support for your hospital”. To this Subodh Mitra promptly replied “Sir, you are mistaken. I have not come to you for any money. There is no dearth of willing donors in Bengal. I have come to you for your blessings”. The PM was so impressed and moved by Subodh Mitra’s response that he extended all his support generously for the cancer hospital and visited the hospital on several occasions and expressed his interest in the activities of the institute which continued to grow under the leadership of Dr. Mitra (Fig. 2).

Dr. Mitra had the courage and charishma to invite the Nobel Laureate Madame Irene Julio Curie who travelled all the way to come to Calcutta to inaugurate the first cancer treatment center of Eastern India on January 12, 1950 (Fig. 3). Even at the formative years, when treatment of cancer patients was the primary goal of CCH, Dr. Mitra, the scholar, could not overlook the importance of widening the knowledge on cancer. He therefore introduced research activities at CCH, both fundamental and clinical, where he actively participated. His magnetic personality drew bright young people to this center which soon attained international standards both in treatment and research.

As research flourished at CCH, Dr. Mitra thought it fit to organize an independent institute for cancer research. Thus was born the Chittaranjan National Cancer Research Centre (CNCRC), located within the hospital premises, in April 1957 financially supported by the DMT and Government of India.
Fig. 2. Dr Subodh Mitra appraising Sri Jawaharlal Nehru, the first Prime Minister of India, of the activities of the cancer hospital and the research centre during his visit to the institute on May 8, 1961.

Fig. 3. Dr Subodh Mitra with Nobel Laureate Irene Julio Curie in front of the first Million Volt X-ray for Radiotherapy in India at the Chittaranjan Cancer Hospital. The hospital was inaugurated by Madame Curie on January 12, 1950.
funding for promising research projects were received from Atomic Energy Commission, Council of Scientific and Industrial Research, Indian Council of Medical Research. Dr. Mitra’s administrative skill and dedication to academic excellence ensured that the research and clinical departments functioned in close collaboration. At that time few would have ventured for international collaboration. But Dr. Mitra had an outlook much ahead of his time, and he had the conviction that his group at CCH and CNCRC were no less than those at renowned cancer centers elsewhere outside the country (Fig. 4). He maintained links with famous institutes like Krebforsching Institute of Germany, Karolinska Institute & Raduin Hammet of Sweden, Royal Marsden Hospital & Royal Cancer Hospital (UK) and Memorial Sloan Kettering Institute (USA). There was a regular flow of Scientists and Clinicians between these institutes and CCH, CNCRC to share and exchange their experience and expertise on equal terms. Dr. Mitra encouraged and inspired his colleagues to excel in their specialized area, present their observation in national and international conferences and contribute to important journals. Younger colleagues were regularly sent for training and updating their knowledge. This speaks of Dr. Mitra’s approach of nurturing doctors and researchers at CCH and CNCRC who would provide care to cancer patients and improve the same by better understanding of the disease. This was also a pioneering effort on his part in our country.

Fig. 4. Dr Subodh Mitra - the scientist, at his research laboratory with his colleagues conducting an experiment.
Major Scientific Contribution

Dr. Mitra added significantly to the understanding of anaemia and toxemia in pregnancy, radiobiology of cancer cells and innovation in cancer surgery and radiotherapy. The most important original contribution of Dr. Mitra recorded and recognized worldwide however is his new technique of management of cancer of the uterine cervix, the commonest form of cancer among women, known and practiced as Mitra’s Operation.

Dr. Jayasree Roychowdhury (the only daughter of Dr. Mitra, who followed her illustrious father and specialized in Oncology to became the longest serving Director of CNCRC/ CNCI) related an interesting story behind the development of this novel operation. Improving the surgical management of cervix cancer with least adversities to the women was foremost in Dr. Mitra’s thoughts. During a visit to Puri, sitting on the sea beach his mind was on the same problem. In an effort to find a solution he was making sketches on the sand of the anatomy of the female pelvis and trying to develop the best possible approach for surgical removal of the tumour of the cervix uteri that would ensure reduced morbidity and mortality. In a flash he found the solution to his problem and the new technique was conceived. He designed, practiced and refined this new technique effectively at CCH which was followed by the official announcement in the British, American and German Gynaecology Congresses and demonstrated by Dr Mitra in Vienna in 1952 and at Berlin University in 1960.


In the Introduction Dr. Mitra wrote “I present a new surgical operation for treatment of cancer of cervix with its five year end result. In 1931, when I submitted my five year statistical end results of cancer of the cervix treated with radiation therapy at the Third International Radiological Congress, I was impressed to find continental surgeons performing the radical vaginal hysterectomy in similar cases …………… the surgical treatment has been reintroduced and gaining popularity because of the limitations and hazards of radiotherapy. The present
contribution is the outcome of my labour for the last ten years.........I believe that this operation can be done with success and with sufficient security to all types of patients irrespective of age, weight and general malnutrition”

This new method was found to be equally effective for stump carcinoma, vaginal carcinoma and cancer of the body of the uterus. This surgical procedure was internationally accepted as advantageous over the previous methods and was practiced for treatment of these cancers worldwide.

Other Academic Achievements

Dr. Subodh Mitra was an internationally recognized leader in the field of Obstetrics and Gynaecology and most academic gatherings in this field were incomplete without him. He was invited to all major conferences on his specialty to chair or preside. Mention may be made of some such important professional meetings he attended like Innsbruck Science Congress (Germany, 1924), International Radiological Congress (Paris, 1931), Bicentenary Congress of Obstetrics & Gynaecology (Dublin, 1947), British Congress of Obstetrics & Gynaecology (London, 1949), International Congress of Obstetrics & Gynaecology (Munich, 1952), International Cancer Congress (Brazil, 1954), International Congress of Obstetrics (Geneva, 1954), 2nd International Congress of Obstetrics & Gynaecology (Vienna, 1961). Dr. Mitra was the only Indian to be elected as Founder Member of the College of Obstetrics & Gynaecology of London (1937). He was the recipient of the prestigious Honoris Causa Membership of the Society of Gynaecology & Obstetrics of Italy in 1944 for his valuable contribution to this field. The same year (1944) he earned the Fellowship of the National Institute (FNI) in recognition of his outstanding contribution to Cancer Surgery, Pregnancy related Toxaemia & Anaemia and Fundamental Researches in Cancer. Dr. Mitra became the Fellow of the American College of Surgeons in 1949 and in 1960 the Academician of German Academy of Science.

Contribution to Medical Teaching and Research

Dr. Subodh Mitra was actively associated with several medical institutes and contributed significantly to the development of teaching, practice and research in medical sciences in West Bengal. He was Director Professor of Obstetrics & Gynaecology at Carmichael Medical College and Principal of Chittaranjan Seva Sadan College of Gynaecology & Child Health and Head of the Department of Gynaecology of this college.
Medical education and research received a new impetus during Dr. Mitra’s tenure in different positions at the Calcutta University as Dean of Faculty of Medicine, as Member of the Senate, the Syndicate and the Academic Council. One of his major achievements as Vice-Chancellor of the university was the introduction of Cancerology as a subject for Post-Graduate and Doctor of Philosophy degrees, as well as the new Diploma course in Radiology & Electrology. As a Director of Chittaranjan Seva Sadan, Chittaranjan Cancer Hospital and Chittaranjan National Cancer Research Centre Dr. Mitra started many in house teaching and training programmes for doctors and nurses for treatment and patient care for cancer. He modernized the patient record system and treatment follow up to statistically evaluate the cancer data and treatment response. This was not done elsewhere in the country at the time so scientifically. In addition he was a pioneer in cancer researches in the country and investigations were taken up on the etiology of cancer in this region, cancer cell biology and radiobiology.

**Social Commitments**

Bestowed with intense humane qualities, Dr. Mitra dedicated his life to social service. He was an enthusiastic Rotarian and was involved in various programmes related to community services. He had organized the Relief Welfare & Ambulance Corps, of which Dr. Mitra was the GOC, and the Jessore Khulna Seva Samity through which he rendered useful and timely help to control epidemics; special mention may be made of the devastating epidemic of Acute Anterior poliomyelitis in the people of Nicobar Islands in 1948. He worked untiringly towards the improvement in health care for mother and child. He served his patients with a missionary spirit and rendered free treatment to the needy.

“….It is not possible to recount all his contribution to society and science …..he had a human approach to all problems and was a true MAN ……”

Dr. Mitra died in harness while he was attending the 2nd International Obstetrics & Gynaecology at Vienna on September 5, 1961.

In a tribute to Dr. Subodh Mitra, his mentor, Dr. Saroj Gupta, the Founder Director of Cancer Center, Welfare Home and Research Institute, Kolkata, remarked “……..He truly possessed the wisdom of an ancient sage, energy of an Englishman and above all the heart of a Bengalee mother”.

Chittaranjan National Cancer Institute, Kolkata, which is the extended and expanded form of Dr. Subodh Mitra’s dream project, enters its 50th year in 2007. Those associated with CCH-CNCRC-CNCI during different phases of the Institute’s evolution pay their respectful homage on this occasion to their Founder—an erudite scholar, a gifted organizer, a skilled surgeon and above all a brilliant human being. His pioneering efforts in medical treatment, teaching and research in the country will inspire the future generation particularly those devoted to Oncology.

Acknowledgement

Grateful acknowledgement is made to the Indian National Science Academy, New Delhi for the grant received for the project work. Special thanks are offered to Dr Jayasree Roychowdhury, former Director of Chittaranjan National Cancer Institute, Kolkata, for providing valuable information and documents/photographs of her father Dr. Subodh Mitra. Information received from Dr. S. Gupta, Director, Cancer Hospital, Welfare Home & Research Institute, is also respectfully acknowledged. Kind help and support received from Ms Ranjana Mitra, Mr. M. Roy of CNCI Library and Mr. G. Bandopadhyay and Mr. S. Das of ABP Pvt. Ltd. Kolkata is thankfully acknowledged.

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