

# JOHN DIQUE: DIALYSIS PIONEER AND POLITICAL ADVOCATE



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## HISTORICAL PERSPECTIVE (1)

### INDIA

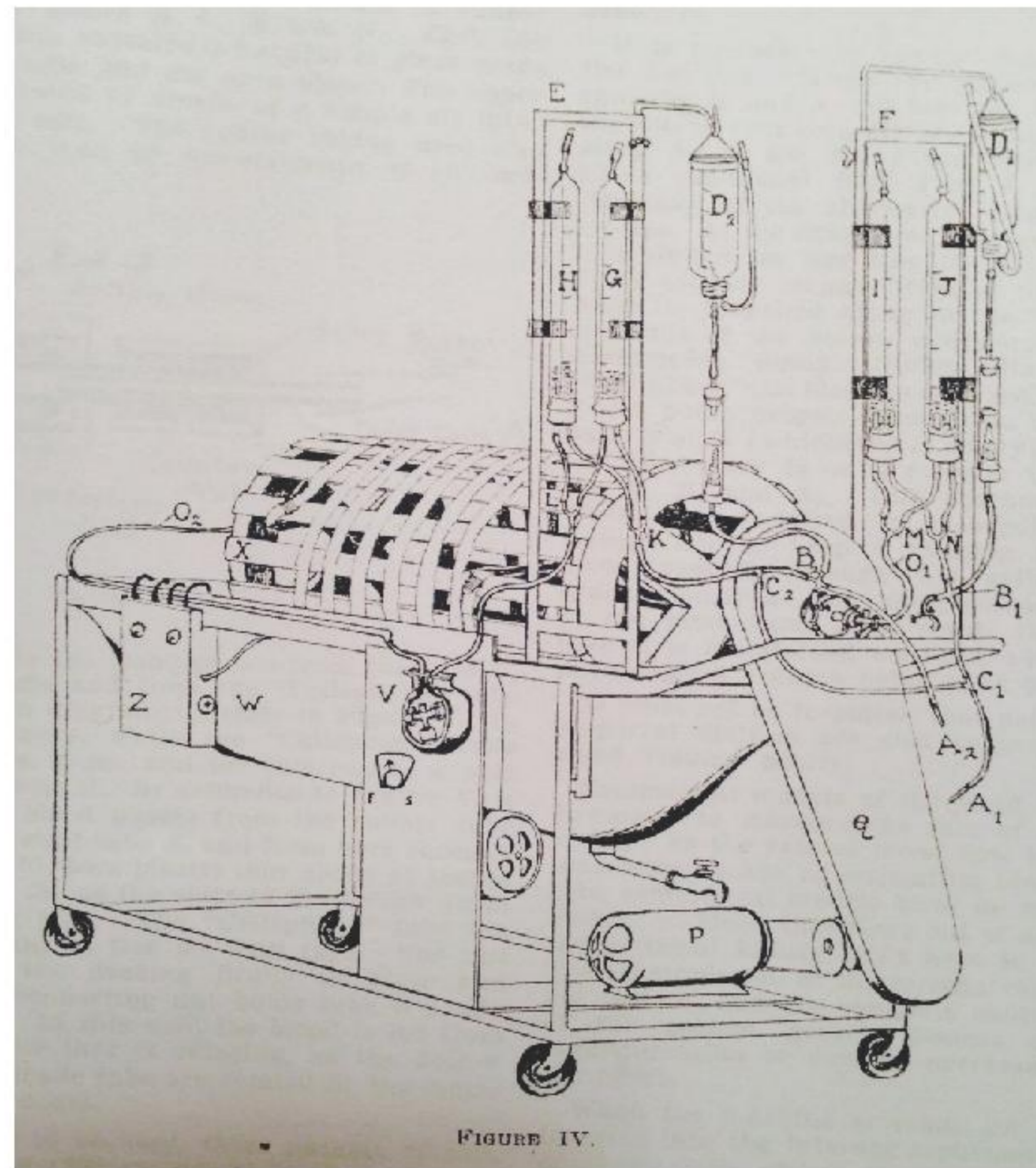
- Europeans started trading with India from the early 16<sup>th</sup> century. The British East India Company arrived in 1608 and a French company in 1664. The British progressively gained control of the Moslem and Hindu empires and principalities. French possessions waned, although Pondicherry remained until 1954. The British purchased Madras (Chennai) in 1639, followed by Bombay (Mumbai), 1661 and Calcutta (Kolkata, 1690). The East India Company gradually developed its own government & army.
- The British Government asserted direct rule following a bloody rebellion in 1857-9 against company rule ('The Indian Mutiny'). It created a series of provinces in which it focused on economic, industrial, educational & infrastructural development; seeking to suppress social tension between the Hindu, the Moslem and the Sikh populations.
- A series of reforms in 1909, 1919 and 1935 improved governance, but encouraged nationalist organizations to vie for independence & power.
- The Indian Army underpinned British control until the end of World War II.
- Independence came in 1947 with partition into India and Pakistan, accompanied by a civil war between Hindus and Moslems. Millions died.
- The administrative dominance of English & Anglo-Indian (locally born of whole or part European ancestry) people rapidly declined.



J.C.A. Dique<sup>1</sup>

## DIALYSIS TREATMENTS Using a Kolff-type machine

- Built by Dique et al. in the Royal Brisbane Hospital's electrical workshop after Kolff's Dutch design of 1947.
- Revolving drum of wooden slats (52 inches long, 18ins diameter) rotated by a motor in a 150L heated bath, mounted on a ward trolley.
- Blood circuit: Cellophane tube (120 feet long, 0.75 inch diameter) wrapped around drum & 'sterilised' by washing with sterile saline.
- Dialysing fluid: Water + NaCl + NaHCO<sub>3</sub> +/- KCl.
- Vascular access: Surgical cut-down in leg with glass needles.
- Set-up took 4 hours, clean up 1 hour.
- Monitoring: - Hourly arterial & venous Na, K, Cl, urea, glucose.  
- Pre & post haemoglobin, protein & HCO<sub>3</sub>.  
- Inflow & outflow blood volume measured continuously by 2 attendants. Frequent blood leaks.
- First treatment on 10th Feb 1954, last in Sept 1956.
- Results: - 9 patients (6 women, 3 men) with acute renal failure.  
- Age: 21 to 47 years.  
- 3 post-partum, 2 post-surgery, 2 post-trauma, 1 malignant hypertension, 1 acute-on-chronic renal failure.  
- 4 survived & 5 died (all from underlying disease).



Kolff-Type Dialysis Machine<sup>2</sup>

## DIALYSIS TREATMENTS

### Using an Alwall-type machine

- Built by Dique et al. at the Royal Brisbane Hospital, modified from Alwall's Swedish design of 1947.
- Stationary translucent Perspex drum within a 150L Perspex tub.
- Blood circuit: 100 feet of Cellophane tube wrapped around the drum.
- Dialysing fluid circulated by an electrically-driven propeller.
- Machine was smaller, more portable, quieter, faster to set up, easier to clean, & required less supervision.
- First treatment in Sept 1957, last in Sept 1963.
- Results: - 11 patients (6 women, 5 men) with acute renal failure.  
- Age: 19 to 59 years.  
- 3 post-partum, 2 post-trauma, 2 transfusion reactions, 2 drug reactions, 1 surgical removal of single kidney, 1 chronic glomerulonephritis.  
- 5 survived & 6 died (all from underlying disease).

## Programme suspended

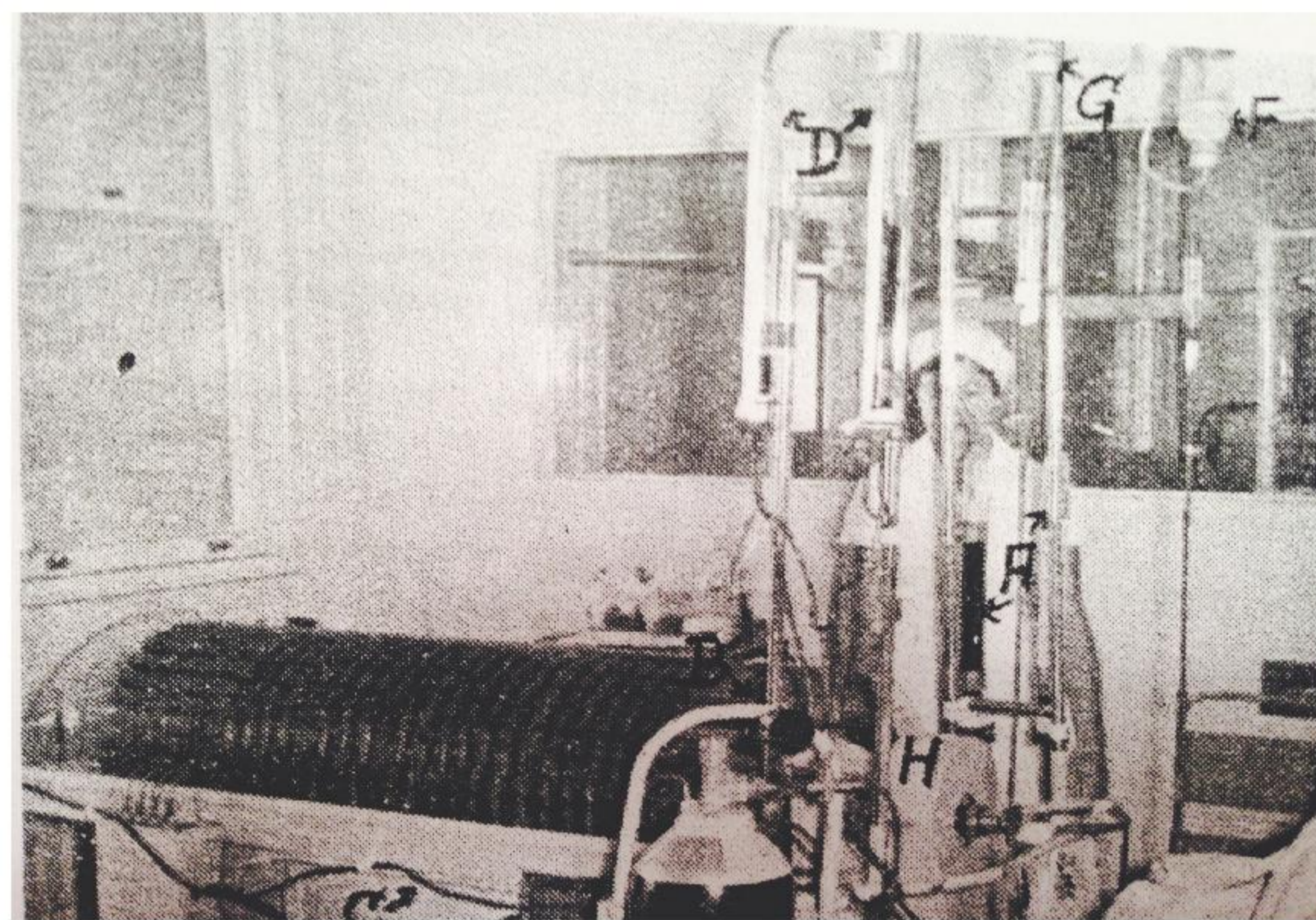
- Dique retired from Royal Brisbane Hospital in 1958, distressed by the death of his 3-year old son from nephritis. No other Brisbane physicians showed sustained interest to follow him until the appointment of Dr James Petrie in 1969 to Princess Alexandra Hospital.
- Commercially-manufactured dialysis machines became available in Australia in 1958 when first Sydney Hospital & later The Alfred Hospital in Melbourne started to provide treatments.



2<sup>nd</sup> Indian Army Transfusion Centre, Poona 1947 (Dique 2<sup>nd</sup> from right in front row)

## John Charles Allan DIQUE

- Born at Mandalay in Burma on 5<sup>th</sup> August 1915
- Father: Indian Army surgeon. French ancestors in India since about 1800.
- Mother: Mainly German, some Indian ancestry.
- Boarding school: Philander Smith College in Naini Tal (Himalayan hill station). 'More British than the British'.
- Athlete. Spoke English; also some Hindi, Urdu & Tamil.
- Spent holidays at the penal colony for political prisoners in the Andaman Islands where his father was a surgeon.
- Medical school: University of Madras, graduated MB, BS in 1941.
- Married Doreen Bradley (English ancestry, but also part-Indian).
- 1941-48: A Captain in the Indian Army Medical Corps Blood Transfusion Service in Lahore, Himalayas, Meerut, Calcutta, Poona (Pune) & Deolali.
- Four children born.
- Ghandi's assassinated & Partition warfare prompted him to emigrate.
- His mother died of typhoid fever in the turmoil whilst waiting for a ship.
- To Australia, but wife's ancestry clashed with White Australia policy.
- Unsuccessfully sought hospital positions in Perth, Adelaide, Melbourne, & Sydney. Obtained a position at the Royal Brisbane Hospital as transfusion & resuscitation physician.



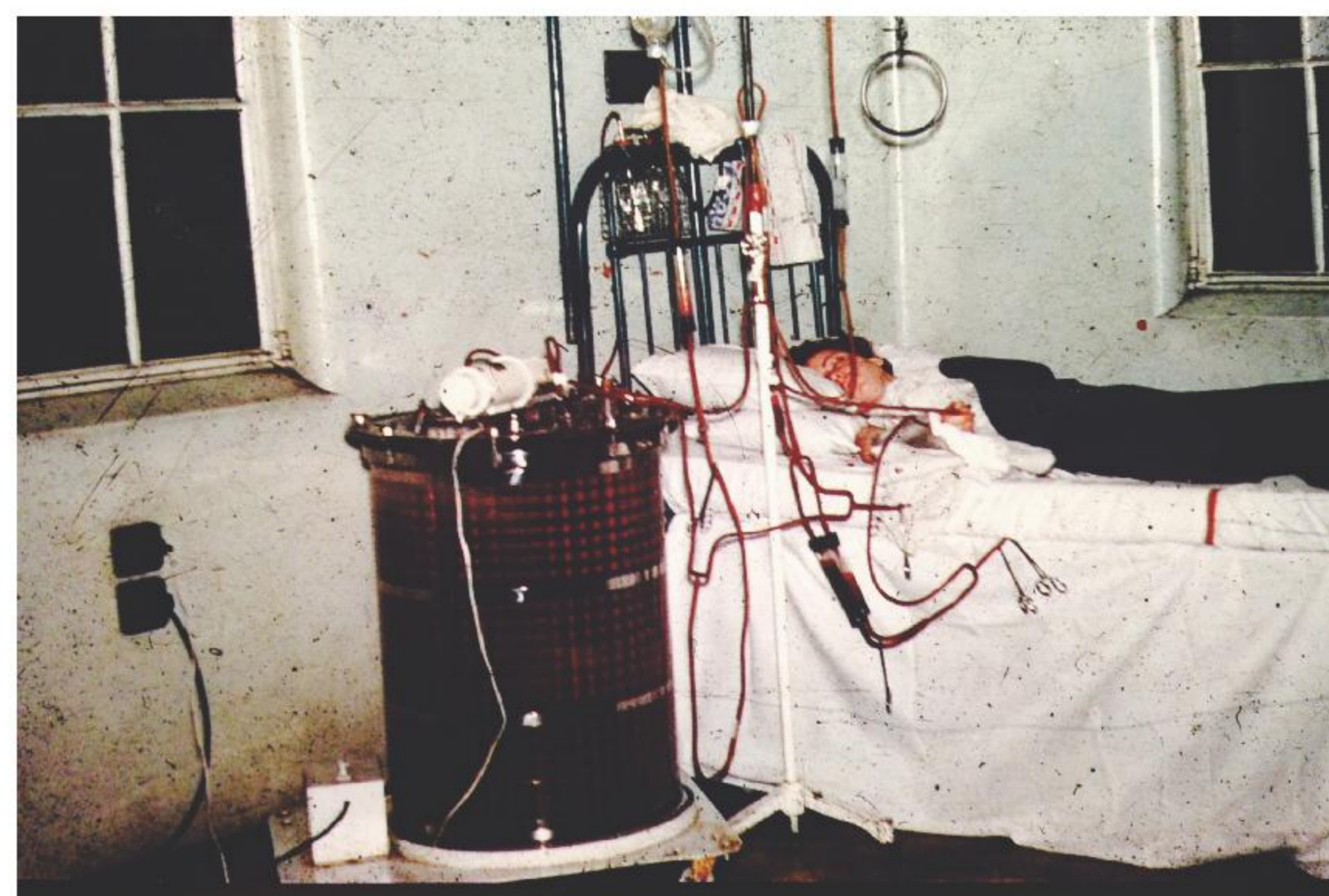
Kolff-Type Dialysis Machine<sup>2</sup>

## DIQUE'S RESEARCH PROJECTS

- 1951: Designing & using a simple blood transfusion set.
- 1953: Designing & using a neonatal exchange transfusion set & developing guidelines for exchange transfusion.
- 1959-64: Undertaking approximately 300 neonatal exchange transfusions, analysing & reviewing the results.
- 1954-56: Building & using a Kolff-type dialysis machine. This was the first attempt at undertaking dialysis in Australia.
- 1957-63: Building & using an Alwall-type dialysis machine.

## DIQUE'S SUBSEQUENT CAREER

- He became a founding member of the College of Pathologists of Australia (later Royal College of Pathologists of Australasia) in 1956.
- Established a private pathology practice in Brisbane in 1958.
- Also practiced clinical medicine as Resuscitator at The Mater Hospital, Brisbane, 1958-74.
- Retired due to ill-health in 1978.
- Became increasingly vocal in cultural & political affairs from 1958 until he died in 1995.



Alwall-Type Dialysis Machine

## HISTORICAL PERSPECTIVE (2)

### BURMA (Myanmar)

- Various Europeans traded in Burma from the 17<sup>th</sup> century.
- Confrontations and local wars between British India and the Burmese kings between 1824 and 1853 led to British annexation of Burma in 1885.
- The Indian Army then kept it reasonably peaceful until the 1930s.
- The Japanese occupied it during World War II.
- A post-war nationalist movement led to formation of the Union of Burma as an independent republic in 1948.

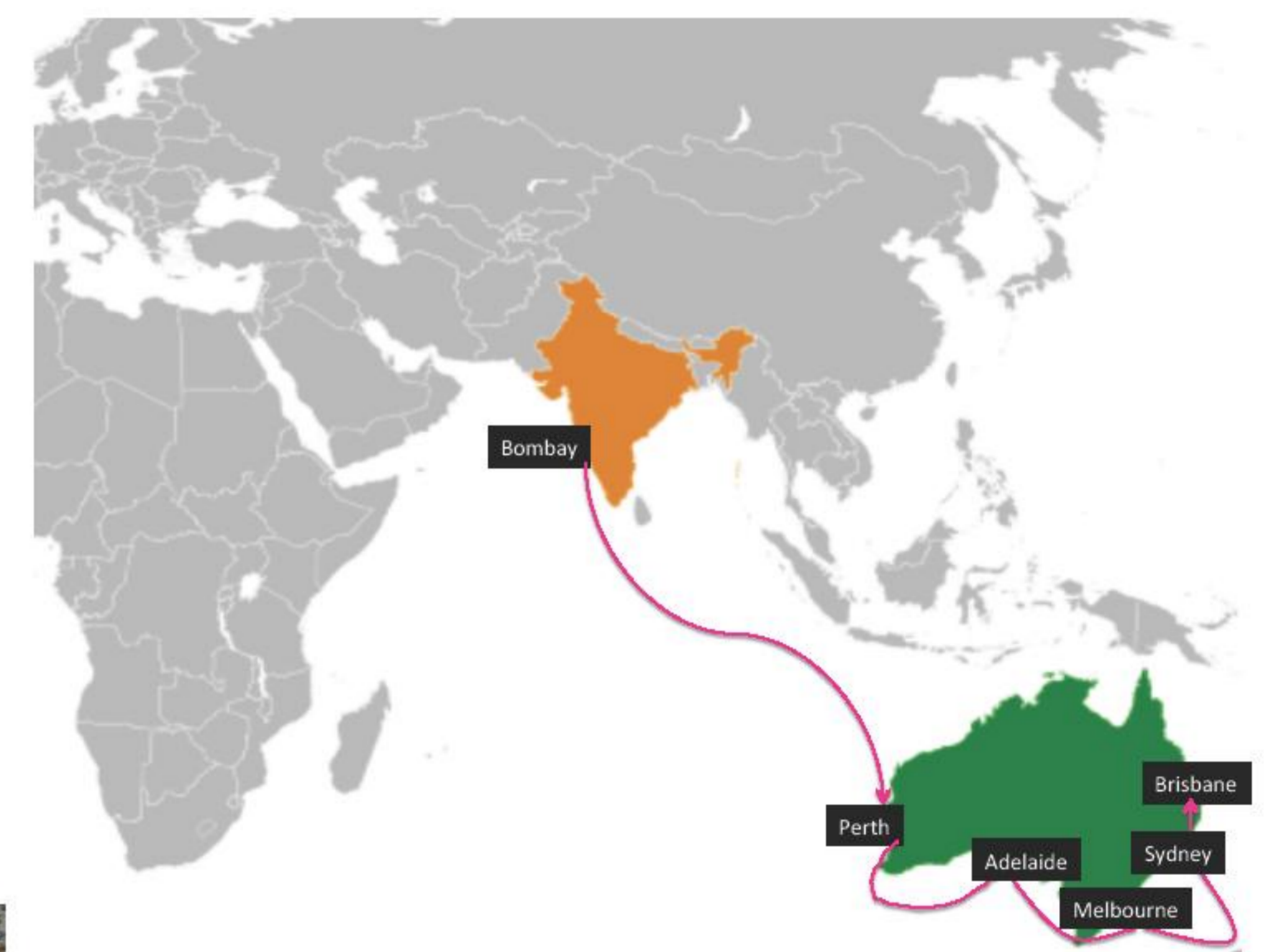
### AUSTRALIA

- An independent monarchy within the British Empire/Commonwealth that was created in 1901 by the federation of 6 British colonies.
- A 'White Australia policy' from 1885 to 1965 minimised Asian immigration.
- Social conditions traditionally resembled those of Western Europe, but Australia was much more prosperous than most European countries as they reconstructed after World War II, thereafter quite similar.
- High quality health care with universal health insurance after 1975.



## DIQUE AS A CULTURAL & POLITICAL ADVOCATE

- Dique's experience in India suggested to him that, despite the best of intentions by social engineers, attempts to build unified communities from diverse racial & religious groups of people would fail, creating strife rather than peace.
- The failure of civil society in India at the time of Independence, with degeneration into civil war & partition, greatly influenced him.
- He saw Marxism, socialism, multi-culturalism & untrammelled capitalism as political ideologies that would all fail.
- He favoured a benign political leadership by a civilised minority over ill-educated majorities.
- He favoured hard work, thrift, education, a high birth rate with large families, a family-orientated lifestyle, good manners, personal charity, & politeness regardless of race or religion.
- He opposed high taxation, promiscuity, & mass migration programmes.
- He believed that people tend to group themselves according to their culture; that culture largely derives from a person's ancestral & religious background; that this creates races; & that disturbing racial harmony will create conflict.
- He considered from personal experience that mixed-race people face particular social difficulties.
- He fiercely opposed Australia's & the West's high immigration & multiculturalism policies of the 1960s to 1990s predicting that they would cause much social strife.
- He held the view that: 'I am a racist. Everybody is racist. Everybody likes the company of people of his own kind'. He merely considered it appropriate to admit what many sought to deny of themselves.
- He was consequently publicly vilified, ridiculed, & labelled as being among the most undesirable members of society.
- If he were still alive in 2015, he might nonetheless claim that ill-advised ethnic policies have bred some of the world's worst terrorists.



From India to Australia<sup>3</sup>

### References:

- J H Tyrer, *History of The Brisbane Hospital* (Boolarong Publications, 1993), p.318
- The Times Atlas of the World* (Times Books, 1977), Plate 27.
- "Australia India Locator". Licensed under CC BY-SA 3.0 via Wikipedia - [http://en.wikipedia.org/wiki/File:Australia\\_India\\_Locator.svg#/media/File:Australia\\_India\\_Locator.svg](http://en.wikipedia.org/wiki/File:Australia_India_Locator.svg#/media/File:Australia_India_Locator.svg)
- J C A Dique, "The Artificial Kidney in the Treatment of Severe Puerperal Infection due to Clostridium Welchii with Report of a Case", *Medical Journal of Australia* (1955) Vol. 1, p.787.
- J C A Dique, "Experiences with the Artificial Kidney", *Medical Journal of Australia* (1957) Vol. 1, p.507.

### Acknowledgements:

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