

Johan Schioldann: History of the Introduction of Lithium into
Medicine and Psychiatry
Birth of modern psychopharmacology 1949

Part II

Renaissance of lithium therapy. Birth of modern psychopharmacology 1949

Chapter 18. Lithium for medicinal use in Australia before Cade

According to Johnson, lithium preparations were available for medicinal use in Australia well before Cade undertook his experimental work.⁶⁷¹

In support of this he provided a fascinating account of how Cade's immediate predecessor in the Victoria Department of Mental Hygiene, W. Ernest Jones had, from 1903 to 1904, been the first Medical Superintendent to Brenor and Radnor Asylum in Wales, and in whose dispensary a 'large 7- or 14-pound canister of lithium salt' was found by his successor, Gordon Diggle, in 1948. Based on the way in which this canister was labelled, it was presumed to date back 'to the early years of the [20th] century'.⁶⁷²

There was also some evidence, Johnson wrote, to suggest that Jones may have employed lithium during the time of his superintendency. Diggle⁶⁷³ communicated to Johnson that it was noteworthy that the large canister was half empty, this being suggestive of the fact that such large quantities of a lithium salt were unlikely to have been used to prepare 'lithia water', that is, for general medical purposes, but that it 'must have been used for psychiatric illness'—a conclusion, Johnson thought, made the more probable since the hospital dealt exclusively with psychiatric patients. Therefore, he asked, 'Did Dr Jones take with him to Victoria a belief that lithium might, for whatever reason, be effective in treating certain types of mental illness?', and if so, 'were such ideas still "in the air" when John Cade came to Victoria just over 40 years later?'

In his position of Inspector General of the Insane for the Colony of Victoria, Jones was to exert some influence on Australian psychiatry (a clinic is named after him at Royal Melbourne Hospital).

Brian Davies of Melbourne discussed the possible influence of Jones on Cade with Cunningham Dax,⁶⁷⁴ who joined the department in 1951. However, Dax doubted that Jones knew Cade well, since 'on the dozen or so occasions that [he] and Jones met, Jones never mentioned Cade, though the work of the department was actually discussed a great

⁶⁷¹Johnson, 1984, op. cit., pp.44, 155 (note 67, D. Guthridge).

⁶⁷²Johnson, 1984 (p.155, note 63), 1999, op. cit., p.220.

⁶⁷³Personal communication, 3 November 1981, quoted from Johnson, 1984, 1999.

⁶⁷⁴Personal communication from E. Cunningham Dax to Brian Davies, 27 January 1982, here quoted from Johnson, 1984, 1999. op. cit.

deal'. It should be added that in Jones's publications, according to Johnson, there is no mention of lithium therapy.

To Amdisen, still according to Johnson,⁶⁷⁵ it seemed 'very probable that the senior doctors working at [Cade's] mental hospital during the late forties may have known about lithium as an antidepressant drug in their young days'.

Further information as to the availability of lithium salts in psychiatric hospitals in Australia pre-Cade is contained in an important personal communication to Johnson from Ashburner of Melbourne, written in 1982.⁶⁷⁶ Spurred by Cade's discovery he himself embraced lithium therapy:⁶⁷⁷

I was from 1947 to 1950 Senior Medical Officer at Sunbury Mental Hospital [...] At a meeting of perhaps a dozen of my colleagues at Royal Park [in Melbourne] called to discuss clinical matters, Cade produced, and read briefly, his forthcoming paper [published 3 September 1949], which was to be the first paper on lithium treatment. We discussed the matter fully. With the brashness that went in all medicine at that time, most of us went home to our hospitals to see if we could find out more about this promising stuff. I went to the pharmacist at Sunbury Mental Hospital and asked him if we had any lithium chloride or lithium citrate in stock, since these were the only substances that Cade mentioned in discussion of his paper. The pharmacist replied 'no, but I have a bloody big jar of carbonate'. This, I think, was a relic of some decades earlier when there was a vogue for using lithium in the treatment of rheumatism. We concocted a suspension of lithium carbonate with tragacanth, flavoured with tincture of ginger, and made up to half ounce doses, each containing 10 grains of lithium carbonate. This, for me, was the start of lithium treatment. I looked round to see who may possibly be helped. My philosophy then, with anything new, was to be sceptical of one-to-one relationship between diagnosis and so-called remedy. I therefore gave lithium carbonate to a select group of patients who had one thing in common – excitation - but were not all manic.

It is worthy of note that Cade's father, David Cade, who for many years worked in mental health services in Victoria, was appointed Medical Superintendent of Sunbury Mental Hospital in 1932. At the 1999 celebratory symposium for Cade in Sydney, Burrows expressed the opinion that Cade might in fact have heard about lithium from his father.

As Johnson pointed out,⁶⁷⁸

⁶⁷⁵ Personal communication, 15 September 1981, cf. Johnson 1984, 1999, op. cit.

⁶⁷⁶ 4 March 1982 (Johnson, 1984, pp.59–60).

⁶⁷⁷ Ashburner JV.: 'A case of chronic mania treated with lithium citrate and terminating fatally'. *Med. J. Aust.* 1950;Sept. 2:386 (cf. Roberts EL.: 'Case of chronic mania treated with lithium citrate and terminating fatally'. *ibid.*, 1950;August 12:261–262).

⁶⁷⁸ Johnson, 1984, 1999, op. cit.

Cade would certainly have had no difficulty at all in obtaining supplies of lithium salts from the dispensary of the hospital in which he worked (Bundoora Repatriation Hospital), thanks to the continuing influence of the uric acid diathesis.

Evidence that there was a ‘continuing influence of the uric acid diathesis’, and that Cade had not only prior knowledge that lithium was an excellent uric acid solvent, but that he also knew that ‘the old lithium pioneers’ claimed that lithium had therapeutic effect in affective disorders, this being associated with the uric acid diathesis, is probably found in Cade’s *case card* regarding his first patient, W.B., to receive lithium, in 1948 (figure 12)⁶⁷⁹ - 6 March 1948: ‘Chronic mania. This extremely high blood uric acid result [17.5 mg/%] is suspect’; 13 April 1948: [W.B.] has been on large doses of lithium citrate for a fortnight’.

<i>Date</i>	<i>Time</i>	<i>Test</i>	<i>Result</i>	<i>Mental State</i>
6/3/48.	12.15 p.m.	Blood uric acid	17.5 mg/100	Chronic mania. This extremely high blood uric acid result is suspect.
10/3/48.	12.15 p.m.	Blood creatinine	2.4 mg/100	
13/4/48.	11.45 p.m.	"	2.0	Has been on large doses of lithium citrate for a fortnight.

Figure 12. From John Cade’s case cards: details of W.B., his first patient to receive lithium. Reproduced courtesy of the Medical History Museum, the University of Melbourne.

In other words, in the present author’s opinion this case card is highly indicative of the fact, if not proof, that Cade was fully acquainted with the views of his ‘scientific forebears’ of a presumed connection between mania (‘gouty mania’) and uric acid.

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⁶⁷⁹ Original case cards, Medical History Museum, University of Melbourne, MHM00985/MHM00986. cf. Johnson, 1984, op. cit., pp.39, 154 (note 30).