

Johan Schioldann: History of the Introduction of Lithium into

Medicine and Psychiatry

Birth of Modern Psychopharmacology 1949

Part I

Birth of lithium therapy 1859

### **Chapter 3. Anti-gout remedies: colchicine, alkaline waters & lithium salts**

Possibly the oldest remedy against gout is colchicine,<sup>108</sup> of which the works of Alexander of Tralles (sixth century AD) may contain the first record. For centuries this drug fell out of favor, presumably due to its drastic purgative effect. Instead, over the centuries, apart from magical and religious cures, a great number of other remedial measures were applied, such as cauterization, moxibustion, acupuncture, setons, blood-letting and galvanism, as well as various herbs and medicinal concoctions, non-protein diets and abstemious living.

The use of alkaline waters was recommended by Soranus of Ephesus in the treatment of 'manic excitement' as early as in the second century AD: -Utendum quoque naturalibus aquis, ut sunt nitrosae, [alkaline springs] et magis si odoris non fuerint tetri, quo membranae capitis quatiantur has been quoted by many writers on this subject.<sup>109</sup>

Authorities such as Boerhaave, Hoffmann, Cullen, Whytt and Wollaston all recommended alkalies in the treatment of gout.<sup>110</sup>

The rationale for using alkaline remedies in 'nervous' conditions can be discovered in Trotter's 1807 treatise.<sup>111</sup> He emphasised that 'gouty constitutions are known to be particularly liable to urinary calculi', and are hence treatable with alkaline remedies; for example, Bath waters:

The uric acid, which has been found to form so large a portion of these concretions, is most likely evolved during the depraved digestion and assimilation of the nourishment; and afterwards separated by the kidneys, and lodged there, or in the bladder. It would be worth while to make experiments on the morbid acidity of a dyspeptic stomach, for there is great reason to think that it does not differ essentially from the uric acid. All the alkalis are given with advantage in these kinds of urinary calculi; and it is fair to allow their chief effect to be in correcting the acid in first passages [...] But when nervous, bilious, and dyspeptic complaints depend, as they often do, on a

gouty diathesis, Bath waters are a sovereign remedy. The energy which they quickly impart to the chylopoietic organs, is soon extended over the whole frame; and all those anomalous symptoms, usually called flying gout, seem to rally to a point, and cease, when the affection comes to be fixed in the extremities. I am thus induced to mention these salutary springs, under the method of treatment.

In 1816 Howship recommended ‘alkalies or magnesium’ as uric acid solvents, and within the next ten years ‘liquor potassae’, ‘potassium carbonate’ and ‘sodium carbonate’ became used by Cooper for the prevention of uric acid stones.<sup>112</sup>

The next addition to these anti-gout remedies was introduced by Alfred Garrod in his famous work *The Nature and Treatment of Gout and Rheumatic Gout*, published in 1859.<sup>113</sup>

Garrod generally recommended uric acid diathesis be treated with dietary measures, physical exercise, and alkaline salines, but ‘within the last two years I have made many trials of carbonate of lithia as an internal remedy [emphasis added], both in cases of uric acid diathesis connected with gravel, and likewise in several cases of chronic gout, and, from what I have experienced, am much satisfied with the results’.<sup>114</sup>

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<sup>108</sup> Hartung EF.: ‘History of the use of colchicum and related medicaments in gout’. *Ann. Rheum. Dis.* 1954;13:190-200. Copeman, 1964, op. cit. Talbott, 1964, op. cit. Goodwin JS.: ‘The tomato effect. Rejection of highly efficacious therapies’. *JAMA* 1984;251(18):2387-2390. Celsus on Medicine. op. cit.

<sup>109</sup> Use should also be made of natural waters, such alkaline springs, particularly those free from any pungent odor which might injure the membranes of the brain’ from Caelius Aurelianus: ‘On acute diseases and on chronic diseases’. Edited and translated by I. E. Drabkin. University of Chicago Press, 1950. pp.552-553,562-563. From Chapter V (p.534): ‘De furore sive insania, quam graeci manian vocant’. cf. Kline NS.: ‘Lithium: The history of its use in psychiatry’. *Mod. Probl. Pharmacopsychiatr.* 1969;3:76-87. Kline NS.: ‘A narrative account of lithium usage in psychiatry’, in: Gershon S, Shopsin, B. (eds.): ‘Lithium. Its role in psychiatric research and treatment’. New York: Plenum Press, 1973. pp.5-13. Amdisen, 1987, op. cit., p.522. Amdisen A.: ‘Historical origins’, in F. Neil Johnson (ed.): ‘Depression & mania’. 1987, op. cit. pp.24-25. Georgotas A, Gershon S.: ‘Historical perspectives and current highlights on lithium treatment in manic-depressive illness.’ *J. Clin. Psychopharmacol.* 1981;1:27-31.

<sup>110</sup> Garrod AB.: ‘The nature and treatment of gout and rheumatic gout’. London: Walton & Maberly, 1859 (and subsequent editions, 1863, 1876). Atsmon, 1963, op. cit.

<sup>111</sup> Trotter, op. cit.

<sup>112</sup> Atsmon, 1963, op. cit.

<sup>113</sup> Garrod, op. cit.

<sup>114</sup> Garrod, op. cit. ‘Lithia Salts in the Treatment of Gout’, pp.435-441. (438), 1863 edition, pp.419-428, 1876 edition, pp.364-372, 459-462.