

King George III, bipolar disorder, porphyria and lessons for historians

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ABSTRACT – In the 1960s, Ida Macalpine and Richard Hunter, mother and son psychiatrists, stated that George III’s medical records showed that he suffered from acute porphyria. In spite of well-argued criticisms by Geoffrey Dean and Charles Dent based on their extensive clinical experience of the acute porphyrias, Macalpine and Hunter were able to garnish extensive support for their claims from historians, psychiatrists, physicians and the media circus and their view is now surprisingly widely accepted. Recent research of George III’s extensive medical records has shown that Macalpine and Hunter were highly selective in their reporting and interpretation of his signs and symptoms and that the diagnosis of the acute porphyria cannot be sustained. The basis for the false claims and the consequences for historians are considered and indicate that there is now an opportunity to reassess George III’s contributions to events in his reign.

KEY WORDS: acute porphyria, bipolar disorder, manic depressive psychosis, medical history, misdiagnosis and medical error

False facts are highly injurious to the progress of science, for they often long endure; but false views, if supported by some evidence, do little harm, as every one takes a salutary pleasure in proving their falseness.

The descent of man Charles Darwin (1871)

This review is concerned with the nature of the recurrent mental ill health of King George III (1738–1820), reinvestigation of the widely accepted belief that he suffered from acute porphyria, how this unlikely diagnosis was obtained and, in particular, why it has gained so much unwarranted support.

In the mid-1960s, Ida Macalpine and Richard Hunter, mother and son psychiatrists, published two papers in the *British Medical Journal*,^{1,2} together with a variety of other publications and presentations and a bestselling book *George III and the mad-business*.³ In these publications they categorically stated that the King suffered from recurrent attacks of acute intermittent porphyria, subsequently changed to the rarer and milder condition variegate porphyria. Although the two papers generated considerable correspondence, much of it critical, their reprinting with supporting statements by John Brooke and Abe Goldberg, leading Georgian historian and a porphyria expert respectively, as a glossy booklet titled *Porphyria: a royal malady*, seemed to set the seal on the claim and this view is generally accepted, especially by historians and the general public.

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However, recent studies by the author and colleagues have provided evidence seriously contesting Macalpine and Hunter’s claim⁴ and indicated, as previously reported,^{5–7} that the King suffered four/possibly five episodes of bipolar disorder.^{8,9}

Brief account of George III’s illnesses

Despite being born two months premature, George III’s childhood and adolescence were medically largely uneventful. Although not the most able politician and rigidly religious, he was England’s most cultured monarch,¹⁰ reigning from 1760 until the regency enactment in 1811. His principal illnesses are listed in Table 1.

Unfortunately medical details are not available for the 1765 episode: Macalpine and Hunter claimed that the illness was a porphyric chest infection, others have indicated that the King had some mental health problems.^{3,6} It was certainly of concern and after his recovery there were extensive discussions on a potential regent as at that time his heir (the future George IV) was only three years old.

The date of his most significant illness was 1788–9 where there are detailed and independent medical records and accounts. The trigger appears to have been a recurrent episode

Table 1. Principal features of George III’s illnesses. Modified version of table reproduced from original article published in JRCPE (© the Royal College of Physicians of Edinburgh).⁹

Date and age	Illness
1765 (27)	January–June: King indisposed with chronic chest infections. Mental health issues (? subclinical depression) largely retrospective. Regency discussions occurred.
1788 (50)	June: Obstructive jaundice (? gall stones). July–August: Convalescence in Cheltenham ? hypomania. October: Serious psychotic illness (acute mania) remitting in March 1789. Regency almost imposed.
1795 (57)	December: Severe bilious attack.
1801 (62)	January–June: Relapse of bipolar disorder.
1804 (65)	February–July: Relapse of bipolar disorder. Progressive loss of vision 1804–8.
1810–20 (72–81)	October: Persisting relapse with fluctuating chronic mania and possible dementia. Regency enacted 6 February 1811.

of obstructive jaundice; diagnosed as ‘concretions of the gall duct’ by Sir George Baker, his senior physician, who recommended a period of convalescence at Cheltenham. The King and his immediate family clearly very much enjoyed the holiday and he was physically very active, bordering on hypomania.

On his return to Windsor in October he had his most florid episode of mental illness which lasted until March 1789. Detailed accounts of his signs and symptoms are available including the Willis papers in the British Library together with various direct and indirect accounts of the King’s behaviour. Following his recovery, the King reduced his workload and took regular summer holidays at Weymouth. The continuing presence of his trusted prime minister, William Pitt the Younger, considerably reduced his pressure and pace of work. The King had further, but milder, episodes in 1801 and 1804 that are less intensely documented but the medical records clearly identify these as episodes of bipolar disorder, essentially mania.⁸

His final episode in October 1810 was preceded by progressive blindness due to cataracts; by 1805 he needed an amanuensis to deal with his extensive correspondence. This episode of mental ill-health persisted and in February 1811 the Prince of Wales was appointed Regent apparently with the King’s tacit agreement. The Manners Sutton papers in the Lambeth Palace Library, the Willis papers and papers in the Royal Archives at Windsor give detailed almost daily accounts of the King’s behaviour during the final decade of his life.

Re-evaluation of the clinical evidence for acute porphyria

The 100 volumes of the Baker, Willis and Manners Sutton papers formed the basis for Macalpine and Hunter’s claims. It is apparent that Macalpine carried out the detailed research, supplying her son with data for their joint publications. They based their diagnosis of acute porphyria on the following features of the King’s illnesses: muscular weakness, blindness, vocal hoarseness, obstructive jaundice, abdominal pains and discoloured urine. These features have been considered in detail elsewhere⁴ and it is clear that their interpretation of them as diagnostic of acute porphyria was misleading and some interpretations were bordering on the fraudulent. It is noteworthy that as psychiatrists Macalpine and Hunter did not apparently consider the mental state of the King during these four major episodes.

The discoloured urine claimed by Hunter to be ‘the final proof of the diagnosis’ is worthy of some mention. Macalpine was able to identify four occasions during the 30 years of the King’s recurrent illness when the physicians reported discolouration. They subsequently claimed a further two unidentified occasions when coloured urine was noted. The bluish particulate material in a single urine sample during his final attack in January 1811, exploited to great effect by the playwright and former historian Alan Bennett, is particularly noteworthy. However, Macalpine and Hunter and other researchers have failed to point to the six occasions in the six weeks leading up to this event when the physicians referred to pale, clear, yellow and normal urine sam-

ples. A single visit to the British Library to confirm the blue urine referred to in the Willis papers would surely have signalled even to non-medics the possibility of selectivity. The observation that three days before the blue urine episode the King commenced a new medication, extract of gentian, was a ‘red flag’ to the present author.

Basis to the porphyric claim

Two main issues are discussed here:

- 1 Why did Macalpine and Hunter so distort the evidence and portray the King as suffering from acute porphyria when it was clear that he suffered from what was then referred to as ‘manic depressive psychosis’?
- 2 Why were historians and some respected scientists and medical doctors so ready to accept unquestioningly their spurious claims?

Much evidence concerning the former is available in the Macalpine and Hunter papers available in the Cambridge and Sheffield Universities and the Wellcome Trust Archives and this is clearly a project for a serious professional historian.

In brief, Macalpine, formerly Hirschmann (née Wertheimer) trained in medicine in various German universities where for a period at Freiberg and Munich she was fellow student with Hans Krebs. In 1933, she moved with her two sons, Charles and Richard Hunter, to England, re-qualified in Edinburgh and married the Manchester businessman George Macalpine. After his death, she and Richard moved to London where she worked as assistant psychiatrist to the dermatology department at St Bartholomew’s Hospital where Richard trained. Trained in the Freudian approach, she underwent psychoanalysis and published papers on syphilophobia and allied subjects before retiring to work full time on medical history. Richard trained as a psychiatrist and worked as a consultant at Colney Hatch Asylum (later Friern Hospital). He had academic aspirations and applied unsuccessfully for chairs in psychiatry. In the 1950s and 60s, mother and son collaborated on a series of papers and books on various aspects of the history of their specialty initially with psychoanalytical concepts. Their psychiatric philosophy moved from a psychoanalytical approach to embrace organic or biological psychiatry and this bias is reflected in their work on George III. Showing that the mad King had a metabolic disorder furthered their aims and clearly their research was coloured by their philosophical agenda. They also sought to remove ‘the taint of madness’ from the House of Windsor for which they hoped to be appropriately rewarded. This aspect of their work has been well reviewed by the eminent medical historian Roy Porter.¹¹

In addition, the support of distinguished biochemists Claude Rimington¹² and Hans Krebs among others, strengthened their position. Any criticism was vigorously countered or ignored and the diagnosis seemed to take on a life of its own. Thus a ‘fairly sharp letter’ from James Bull, dean of the Institute of Neurology, where Hunter had an honorary appointment, countered a critical comment by Herbert Scheinberg in New York.¹³ In contrast,

the only critical review of their book was in the *Psychoanalytic Quarterly* where Bernard Meyer described it as 'ranging from medical brilliance to psychiatric bumbling'.¹⁴

It is not at all clear why so many eminent professional historians supported the porphyric claim. First among these was John Brooke, a former student and collaborator of Sir Lewis Namier and the senior editor of the Historical Manuscripts Commission. Stating in a response to the first *BMJ* paper that he was 'not competent to assess the work of Drs Macalpine and Hunter', he went on 'to emphasise its significance for biographers of George III and indeed for biographers in general'. This was followed by continuing collaboration, refuting any criticism of their work and wholesome support in his own publications.¹⁵

Similarly the unwavering support of Ian Christie of the Institute of Historical Research, University of London, was also important in giving the work the historian's stamp of approval. Thus when an anonymous lady reviewer of the Macalpine and Hunter book dared criticise the denial by them of any mental disturbance of the King in 1765¹⁶ it was greeted with the riposte: "We have much to learn", your reviewer writes. Indeed, we have – all of us, your reviewer not least'.

It is not clear why these and other eminent supportive historians did not take the time necessary to consult the primary sources concerning the King's illnesses. Perhaps the enthusiastic support from the editorials accompanying the two papers in the *BMJ* was partly to blame?

The porphyria claim has subsequently taken on a life of its own with multiple statements of its veracity, whether signs at Kew Palace or the National Portrait Gallery, in Royal Society papers and most noteworthy in Allan Bennett's play (1991) and film (1994) and in Peter Maxwell Davies's 'Portraits for a Mad King' (1971): correction will be a lengthy and painful process.

Consequences and lessons from the George III-porphyria episode

Blatant errors in history are doubly damaging to the perpetrator and, probably more relevant, to the interpretation of contemporary events. Hugh Trevor-Roper's reputation was damaged by his authenticity claims for the Hitler diaries. His reputation was only partially restored by his excellent posthumously published biography of the Royal College of Physicians senior fellow Theodore de Mayerne.¹⁷

The failure to consider possible agenda(s) behind Macalpine and Hunter and their claim is a significant factor. In some ways it might be argued that they were ahead of the times with their rejection of psychoanalysis, their support for biological psychiatry and for the integration of psychiatry into mainstream neurological practice. Their extensive writings clearly show this agenda and is apparent in their magnum opus, *Three hundred years of psychiatry*.¹⁸ Some have also speculated on the mother and son relationship^{11,19} and this may have played a role in their research aims.

Their views would have had some contemporary resonance in the 1960s, as there were several reports of surveys of mental hospital inpatients looking for occult cases of porphyria. Some showed a raised prevalence, although the detection methods were suspect, others including a UK survey failed to detect any cases in some 15,000 patients.²⁰ A more detailed investigation of the basis and surrounding circumstances for this porphyria claim needs to be undertaken by a professional medical historian.

The porphyria claim has unfortunately spawned a rash of claims that other historical figures, including a myriad of antecedents and descendants of George III, also suffered from porphyria (Table 2). Close examination of these claims has not

Table 2. Retrospective diagnoses of porphyria.

Name	Porphyria	Correct diagnosis	References
King George III (1738–1820) and various antecedents and descendants	AIP/VP	Cholelithiasis bipolar disorder/ Chronic mania and dementia	Macalpine I, Hunter R. <i>George III and the mad-business</i> . London: Allen Lane, 1969. Röhl JCG, Warren M, Hunt D. <i>Purple secret</i> . London: Corgi Press, 1999. Rushton AR. <i>The Royal maladies</i> . Victoria, Canada: Trafford Publishing, 2008.
Mary Darwin (née Howard, 1740–70) wife of Erasmus Darwin	AIP	Alcohol misuse?	Thiele S, With TK. <i>Scand Clin Lab Invest</i> 1964;16:465. King-Hele D. Doctor of revolution. <i>The life and genius of Erasmus Darwin</i> . London: Faber and Faber, 1977. Colp R. <i>To be an invalid. The illness of Charles Darwin</i> . Chicago: The University of Chicago Press, 1977.
Admiral Francis Beaufort (1774–1857)	PCT	Psoriasis	Friendly A. <i>Beaufort of the Admiralty</i> . London: Hutchinson and Co, 1977. Courtney N. Gale Force 10. <i>The life and legacy of Admiral Beaufort</i> . London: Headline Book Publishing, 2002.
Vincent van Gogh (1853–90)	AIP	Bipolar disorder Substance misuse	Loftus LS, Arnold WN. <i>BMJ</i> 1991;303:1589–91. Arnold W. <i>Vincent van Gogh: chemicals, crises and creativity</i> . Boston, USA: Birkhauser, 1992.

AIP = acute intermittent porphyria; PCT = porphyria cutanea tarda; VP = variegate porphyria.

shown, so far, any that stand up to scientific rigour but this is an ongoing study.

A further and most important consequence has been the inhibiting effect that the porphyria diagnosis has had on an analysis of the psychological consequences of the King's bipolar disorder. Thus recent research has suggested that recurrent episodes of bipolar disorder have a neurotoxic effect and can lead to dementia. This may account for the persistence of the King's ill-health during his eighth decade.^{7,9} There is increasing evidence that bipolar patients have inter-episode psychological consequences such as a low self-esteem²¹ and impaired relationships with their children.²² These, together with the implications and political consequences of adverse events during George III's long reign are now available for study. The recent interest in the health issues of senior leaders and politicians indicates that this is a fertile area for study.²³

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