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The enigma of Lenin's (1870–1924) malady

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The health of heads of states is not always handled in the same way as an incapacitating disability in ordinary professionals. Instead of suspension of responsibilities, the health status of political leaders is concealed, especially when the illness is perceived as stigmatizing, such as organic mental impairment or sexual disorder. The objective of the present paper is to analyse the malady of Lenin (1870–1924) in the light of relevant and new medical information. It is hoped that this will accentuate the need for transparency when the health of a statesman is concerned.

Introduction

Ostensibly, the physical and mental health of political leaders and heads of state is often reported and discussed in public, conforming to the contemporary requirement for accountability. In reality, however, information regarding political leaders is frequently suppressed, particularly where illnesses such as venereal diseases and organic mental impairment carry cultural or social stigma. Consequently, sick leaders may not resign despite their evident incapacity to fulfill public duties responsibly. This is contrary to the routine practices of occupational medicine where, as a rule of thumb, patients are required to suspend professional activities until recovery. This routine is firmly invoked in occupations that entail responsibility for the lives of others, for example physicians, pilots and bus drivers.

Several political leaders in democratic society in the 20th century were notable for not having suspended public duty during their illnesses, including the 28th (1913–1921) and 32nd (1933–1945) Presidents of USA – T. Woodrow Wilson and Franklin D. Roosevelt, respectively (Toole, 1999), Sir Winston Churchill, the British Prime Minister in the early 1950s (Storr, 1990), and Mr Menachem Begin, Prime Minister of Israel in the early 1980s (Post and Robins, 1993). In undemocratic societies this is much commoner, and Vladimir Il'yich Lenin (1870–1924) is the most prominent example of a non-democratic leader whose illness was publicly concealed during its lengthy duration and even in the aftermath of the Soviet Union, 70 years after his death. The plethora of newly disclosed information regarding his illness has been discussed only partially in the medical literature (Lopukhin, 1997; Roslyakov, 1997; Hesse, 1998; Arutyunov, 1999; Danilov, 2000; Rodionov, 2000; Spivak, 2001). Thus, the objective of this paper is to analyse Lenin's disease in the light of recently uncovered information.

Vladimir Lenin (V.I. Ul'yanov) was a prominent figure in modern history. Lenin developed the theory and practice of the 'Social Revolution' and the 'Dictatorship of the Proletariat'. In 1917, Lenin led the Russian October Revolution and created the Soviet Union and the Comintern, which he headed until his death in 1924.

First signs and symptoms of Lenin's disorder

According to the official version, Lenin's illness began in 1922, although the first signs and symptoms were probably manifested many years earlier (Krupskaya, 1925; Osipov, 1990; Volkogonov, 1994). From archival documents, the former Soviet Minister of Health, Professor Boris Petrovskii, concluded that Lenin had suffered from his illness for more than 10 years before any overt references to the illness were made (Petrovskii, 1990).

Lenin's records from 1900 include names and details of German neurologists and psychiatrists to whom he was referred. Some specialized in neurolues (brain syphilis) (Volkogonov, 1994; Lopukhin, 1997; Roslyakov, 1997; Arutyunov, 1999). His wife Nadezhda Krupskaya wrote in her memoirs: 'At the end 1902 … Vladimir Il'yich became ill and suffered from severe nervous illness. When an eruption appeared, I read a medicine reference book and concluded that he was infected with trichophytosis' (Krupskaya, 1925). Later, Lenin turned to specialists for help (Danilov, 2000). He was also hospitalized for 2 weeks. However, the real nature of his problem remained unknown.

His illness made him irritable and ill-tempered; listening to music and especially to the violin became unbearable for him. He demanded to reduce the sound level in all his offices and had noise-reducing devices

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installed (Volkogonov, 1994; Lopukhin, 1997; Arutyunov, 1999). Headaches prohibited him from working (Flerov, 1987; Krupskaya, 1989; Arutyunov, 1999; Danilov, 2000).

It is clear that these symptoms were not the result of the assassination attempt in 1919 when Lenin was wounded with one bullet penetrating the left upper arm with the intact projectile lodged superficially until removed later and a second bullet entering through the left scapula and exiting the right neck without significant damage. Lenin returned to his routine after a short rest (Petrovskii, 1990; Lopukhin, 1997).

The official version of Lenin's malady

The official report of Lenin's disease is actually that of Professor Viktor Osipov, a famous Russian psychiatrist who treated Lenin in 1923. In his opinion, the period of evident illness should be divided into three periods (Osipov, 1990). In the first (March–December 1922), short episodes of loss of consciousness occurred followed by numbness on the right side of the body affecting initially the right hand. The numbness was sometimes accompanied by transient right-hand paresis and motor dysphasia. These attacks occurred about twice a week, lasting from 20 min to 2 h. Osipov interpreted these attacks as 'fatigue with no serious organic disease' (Osipov, 1990). After convalescing in the village of Gorky, his condition ameliorated remarkably. In August 1922, he resumed regular activities at full steam for several months.

The second phase of Lenin's disease began in December 1922, when he was suddenly inflicted with right hemiparesis without dysphasia. He had to dictate his articles as he was unable to write. In February 1923, he composed his last political declaration (Osipov, 1990).

The terminal period of Lenin's disease started in March 1923, when he suffered irreversible right hemiparesis with both motor and sensory aphasia and alexia. In May 1923, he was taken again from the Kremlin to Gorky village where his condition improved slightly and he received speech therapy but, in June 1923, his condition deteriorated. He suffered from throbbing headaches, restlessness, hallucinations, sleep disturbance and loss of appetite. A month later, his condition improved and his wife mediated between him and the outside world. At that point Lenin was able only to express a few words, although his ability to undertake verbal repetition was relatively preserved. His reading ability improved slightly and he could name objects in pictures presented to him. He began practising writing with his left hand (Osipov, 1990). Yet, Lenin's illness gradually relapsed. In mid-October 1923, episodes of syncope occurred, lasting 15–20 s each, initially occurred three to four times per week and later more frequently. Subsequently epileptic seizures appeared, with at least one noted in the medical records. The epileptic seizures worsened inexorably. He became lethargic and was bedridden until his death on 24 January 1924. The terminal event was status epilepticus, which lasted 50 min. Finally his face became congested and reddened during a final, cardiorespiratory arrest. Resuscitation attempts failed (Osipov, 1990).

The pathological findings

Autopsy was performed the next day by Professor Alexei Abrikosov in the presence of the Commissar of Health, Dr Nikolai Semashko. In the USSR, treating physicians had to participate in the autopsy and sign its report, but of the 27 physicians who had treated Lenin (including eight foreigners) only eight signed: seven Russians and a German (Förster) who knew no Russian. Two pathologists also signed the protocol. Notably the famous director of the Brain Institute in Petrograd, Professor Vladimir Bekhterev (1857–1927), who had examined Lenin at least once, was not invited to the autopsy (Nikiforov, 1986; Arutyunov, 1999).

The significant autopsy findings were: an ulcerated atheromatotic plaque severely stenosed the abdominal aorta. Minor changes were observed in the coronary arteries, and the left heart ventricle was hypertrophied. Complete obliteration of the left internal carotid artery was noted, with diffuse atheromatotic changes and stenosis of all intracranial arteries, especially the ascending and inferior frontal branches of the middle cerebral artery. The vertebral and basillary arteries were thick and sclerotic.

The brain weighed 1340 g with the left frontal lobe smaller than the right. The left hemisphere contained multiple foci of yellow softening with cystic changes. Two areas of softening were noted in the right occipitotemporal border. On external examination the left hemisphere contained four degenerative areas with cystic changes adjacent to the cortical surface and invading the subcortex – in the paracentral gyrus, in the high parietal gyri, near the occipital pole and in the temporal gyri. The lateral ventricles were relatively widened, more remarkably in the left hemisphere, and contained transparent liquid. Blood vessels above the corpora quadrigemina were congested with blood with signs of hemorrhage. Cerebellar section through the vermis revealed transparent liquid (Osipov, 1990; Petrovskii, 1990).

Abrikosov formulated the diagnosis as 'diffuse atherosclerosis, most remarkable in the brain arteries'. The attending physicians concluded 'overwhelming

impairment of cerebral blood circulation; and haemorrhage around the corpora quadrigemina' (Lopukhin, 1997; Arutyunov, 1999; Danilov, 2000).

Neurosyphilis as a possible diagnosis

Syphilis is ignored as a possible diagnosis in the official report (Volkogonov, 1994). However, it is our hypothesis that Lenin suffered from neurosyphilis from the first decade of the 20th century, and probably even earlier when the young Lenin lived in Zurich, Geneva, Munich, Prague, Vienna and London. Despite the myths, Lenin was not a puritan (Roslyakov, 1997; Arutyunov, 1999). On 18 July 1895, he was admitted for 2 weeks to Borhardt's clinic in Switzerland (Danilov, 2000). Lenin did not disclose the reasons for this but he wrote to relatives that he had: 'a good time and found myself … in a Swiss resort' (Lenin, 1970).

Returning to Bremen after examining Lenin in Russia, the renowned German syphilis specialist Professor Max Nonne hinted in response to a question about Lenin's illness 'everybody knows for which brain disorders I am called' (Flerov, 1987).

The famous Russian physiologist Ivan Pavlov was quoted to assert that Lenin suffered from syphilis while at the helm of the Russian Government '… he was a typical patient suffering from progressive paralysis'. Moreover, Pavlov was acquainted with several researchers who studied Lenin's brain and confirmed finding changes consequential of 'syphilis and progressive paralysis' in Lenin's brain (Flerov, 1987).

Professor Kramer, who attended the autopsy, thought that the pathological findings were most compatible with neurosyphilis. His signature and that of Dr Kozhevnikov, who also suspected neurosyphilis, were missing from the official protocol (Witztum and Lerner, 2002; Lerner, 1979, unpublished observations). Specialists who gained access to Lenin's archives noted that the results of urine tests but not of blood tests were present, although records show that blood tests were taken repeatedly (Lopukhin, 1997).

Dr Hünter Hesse, a German specialist in the history of medicine who studied Lenin's illnesses, also pointed at Lenin's sterility, suggesting combined infection with syphilis and gonorrhea (Hesse, 1998). He also mentioned that Lenin was treated for 6 weeks in the outpatient clinics of Berlin's Moabit hospital for unknown reasons and that his wife was affected by a 'feminine' disease (Hesse, 1998).

The Commissar of Health Semashko reported in his memoirs that the damage to the blood vessels in Lenin's brain was so extensive that a metal sound was elicited by the touch of forceps and that the lumina of vessels were narrower than a hair (Osipov, 1990; Volkogonov, 1994; Arutyunov, 1999; Danilov, 2000). This, and the massive sclerosis of cerebral blood vessels described in Lenin's autopsy (Osipov, 1990; Freeman, 1991; Lopukhin, 1997) are compatible with neurosyphilis in its meningovascular form (Victor and Popper, 2001).

The clinical picture also strongly suggests neurosyphilis as general paresis occurs typically 10–20 years after the primary syphilis infection (Roos, 1999). The personality and cognitive changes can mimic atherosclerotic cerebrovascular disease (Stoudemire *et al*., 2000). Moreover, symptoms such as headache, vertigo, insomnia and irritability, that inflicted Lenin could be the clinical manifestation of the slowly progressive vascular syndrome of meningovascular syphilis (Lukehart and Holmes, 1994).

There are many versions of Lenin's autopsy protocol; some claim a minimum of three (Lopukhin, 1997) others of eight (Lerner, 1979, unpublished observations), but no version is authorized. The official version was publicized shortly after Lenin's death, to counter widespread rumours that he had died of syphilis but this failed to stop them. Therefore, an additional protocol with histological analyses was issued to prove that Lenin had not suffered from syphilis. The anatomical loci chosen to make this claim were atypical and typical organs heavily affected in syphilis, such as the carotid and vertebral arteries or the aortic arch, and typically affected brain areas were ignored (Lopukhin, 1997).

Only after the fall of the Soviet regime when secret archives were opened for a short period, did it became possible to retrieve documents. It was discovered that Commissar Semashko unequivocally instructed Chief Pathologist Abrikosov to prove that Lenin had not had syphilis (Arutyunov, 1999; Danilov, 2000). For the first time, these relevant documents are available in English. The recently disclosed accounts of two foreign physicians who treated Lenin, further support these observations.

The last photographs published of Lenin were only recently revealed to the public (for example Fig. 1). In contrast to the well-known photographs and pictures, this picture reflects the rapid deterioration in his condition. The impression is of a seriously ill person with a strange extinguished, haunted look.

Strümpell's testimony

Dr Adolf von Strümpell an eminent neurologist and internist from Leipzig mentioned in his 1925 memoirs the medical consultation in Moscow just briefly. However, sections from his diary were published in 1974 by his daughters Dr Regina Strümpell and Dr Anna Klapheck from Dusseldorf (Strumpell and Klapheck, 1974). There he noted the first medical consultation

Figure 1 The last year of Lenin's life.

with the Russian professors Kramer and Kozhevnikov: 'March 20, 1923 – Endarteritis luetica with softening is very probable, although the diagnosis of lues is uncertain'. The next day he examined Lenin in his apartment. Lenin extended his left hand to him in a friendly manner. Right hemiplegia and near-complete motor aphasia with right hemianopsia were diagnosed. The same afternoon, the full team of consultants met and discussed endarteritis luetica with secondary softening as the highly likely diagnosis. However, this diagnosis remained uncertain as the CSF was normal and Wasserman's test was negative but in tertiary syphilis Wasserman's test in the CSF is false negative in 34–90%, while as in blood tests only 5% are false negatives (Sepp *et al.*, 1950; Lishman, 1987; Isselbacher *et al.*, 1994; Stoudemire *et al.*, 2000). Additional diagnoses were proposed including cerebral tumour and subdural haematoma. Dr Strümpell noted in his diary that the patient had too many attending physicians and added, following another examination of Lenin, 'diagnosis uncertain and prognosis uncertain' (Strumpell and Klapheck, 1974).

Henschen's testimony

In 1974, Folke Henschen, Professor Emeritus of Pathology from the Karolinska Institute published his personal reminiscences of his visit to Moscow while accompanying his father, Professor Solomon Henschen, one of the eight 'European' physicians invited in March 1923 to treat Lenin. The father gave a detailed report of his visit to Moscow in the meeting of the Swedish Medical Society on 26 February 1924 (Henschen, 1974).

Upon arrival in Moscow, he participated in a consultation with six foreign physicians and the two local attending physicians. During each of the next 4 days two different physicians examined Lenin, and Henschen was paired with Strümpell. During their examination, Lenin was coherent and cooperative, leaving the impression of an intact intellect. He performed all the verbal commands and understood all his examiners' questions but his verbal response was limited to a few Russian and German words due to motor aphasia. The examiners noted complete right hemiparesis without left-sided motor deficit. The consultants concurred regarding both the medical treatment and the poor prognosis.

A few days later Lenin's condition worsened and he became wholly apathetic and unresponsive to verbal stimuli. Henschen noted 'regarding the primary etiology of Lenin's disease … Perhaps the apparent cause could be a common and non-specific etiology, since Wasserman's serologic test in CSF was negative'.

Henschen considered the terminal event, 10 months later, to be status epilepticus with hyperthermia of 42.3°C and respiratory arrest (Henschen, 1974).

Henschen, having received the detailed autopsy report with Semashko's diagnosis of 'erosive sclerosis', disputed the final diagnosis of intracerebral haemorrhage for lack of evidence with only a small haemorrhage near the corpora quadrigemina. Massive central intracerebral haemorrhage should have demonstrated ventricular engorgement with blood but the ventricles were filled with clear fluid. Henschen (1974) believed that the document was aimed at the Russian public.

Discussion

Various sources support the assumption that Lenin suffered and died of syphilis. The official efforts to conceal Lenin's infliction with a stigmatized venereal disorder were impressive but even more significant were the attempts to completely hide Lenin's illness. These succeeded, in part, due to the lack of English language scientific publications regarding involvement of syphilis

in Lenin's illness and death. Kaplan and Petrikovsky's paper (the only relevant paper in English) appeared in 1992 before the collapse of USSR and the opening of secret archives, relied heavily on Osipov's memories from 1930 and ignored significant sources in the Russian language that had already appeared outside the USSR (e.g. Flerov, 1987). They did not discuss the differential diagnosis and chose to ignore significant clinical data that could indicated an alternative diagnosis (Kaplan and Petrikovsky, 1992). This case could serve as a good demonstration of non-purposeful misdiagnosis or even of conceptual misdiagnosis – when all the data is available but conclusions are misleading under the spell of a misconception (Witztum *et al.*, 1996). The possibility of this diagnosis has been discussed in several German and Russian popular newspapers and books (Henschen, 1974; Strumpell and Klapheck, 1974; Flerov, 1987; Lopukhin, 1997; Roslyakov, 1997; Hesse, 1998; Arutyunov, 1999; Danilov, 2000).

The detailed stages of Lenin's illness correlate highly with the clinical course of neurosyphilis. The clinical correlates of middle cerebral artery involvement including hemiparesis and aphasia are typical in neurosyphilis, as are the autopsy findings of complete obliteration of large-, medium- and small-sized blood vessels.

The tremendous fees offered to foreign experts for consultation (Förster and Klemperer received 50 000 rubles in gold each, and Henschen received 25 000 Swedish Krone) suggest payment for silence (Volkogonov, 1994).

It is possible that future DNA technology applied to preserved Lenin's brain material (Spivak, 2001) ultimately could establish or disprove neurosyphilis as the primary cause of Lenin's death.

The concealment of Lenin's incapacity during his lengthy terminal disease enabled the consequent usurpation of Soviet leadership by Stalin and this demonstrates clearly the horrid consequences of deliberate disinformation regarding the health of political leaders, a lesson that is just as relevant today. Lenin chronic illness and his death at an young age cleared the way and created a political vacuum and administrative decontrol. These were fully exploited by the usurper Stalin who took over both the Communist party and the Soviet Union for the next three decades.

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