

Lesson of the Week

Reversible causes of altered consciousness after spontaneous subarachnoid haemorrhage

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The consciousness of two-thirds of patients is altered to a varying degree after a subarachnoid haemorrhage.¹ We report on a patient who, besides losing consciousness at the onset, developed four other reversible causes of altered consciousness.

Case report

A right-handed woman aged 56 had a sudden episode of loss of consciousness on 27 January 1981. When she recovered three hours later she had signs of meningeal irritation, a left hemiparesis, and an expressive dysphasia. Computed tomography (CT), performed four days later, showed a right temporal haematoma, and a bilateral carotid angiography, performed on 6 February, showed a right posterior communicating artery aneurysm but with severe arterial spasm. Surgery was deferred for six weeks because of the spasm, and she was sent back to the referring hospital. Her condition remained static for five weeks; she was reluctant to walk and to feed herself. In the fifth week she lost consciousness twice in three days. On the first time she had a major fit.

On examination at this centre on 11 March she was in a coma and had no papilloedema and no signs of meningeal irritation. An electroencephalograph showed generalised bilateral delta activity. The CT scan (taken on 11 March) showed that the haematoma had disappeared and the size of the ventricles was normal. Her serum sodium concentration was 110 mmol(mEq)/l and potassium 4.1 mmol(mEq)/l, with a serum osmolality of 210 mOsm/kg. Her urine osmolality was 786 mOsm/kg, with a urinary sodium excretion of 177 mmol(mEq)/l. She was treated by restricting fluid intake and with fludrocortisone.

Despite having normal electrolytes and osmolality, six days later she gradually lost consciousness. A CT scan (17 March) (figure) showed massive communicating hydrocephalus with periventricular oedema. The ventricles were drained, and this was followed by appreciable improvement. Three days later the aneurysm was ligated, and a ventriculoatrial shunt was inserted on 27 March. Four days later she was fully conscious but was disorientated in time, place, and person. She did not recognise her husband and her recent memory was definitely impaired with confabulation. A repeat CT scan (1 April) showed normal-sized ventricles. The erythrocyte transketolase test showed a thiamine pyrophosphate effect of 50% (normal range 0-15%). She was therefore treated with thiamine and intravenous Parentovite. Her orientation and memory gradually improved.

Rare, reversible causes of altered consciousness that occur after a subarachnoid haemorrhage can often be treated if recognised



CT scan on 30 January (left) and on 17 March 1981 (right), showing the development of the hydrocephalus and periventricular oedema.

Five days later she knew the name of the hospital and was orientated to person and time. A month later she was fully orientated to time, place, and person. Her recent memory was normal, and she had no confabulation.

Comment

It is important to recognise certain complications of subarachnoid haemorrhage because they influence management, particularly surgical management. Our patient developed severe hyponatraemia, probably owing to inappropriate antidiuretic hormone secretion, which is a recognised complication of subarachnoid haemorrhage that may mimic further bleeding.² She had a major fit, which is a known complication of subarachnoid haemorrhage¹ and hyponatraemia.³ When these were treated she became comatose because of a massive communicating hydrocephalus. Hydrocephalus was clinically important in 7% of patients with subarachnoid haemorrhage in two other reports.^{4 5} A permanent Korsakoff syndrome is known to occur in this disorder, especially from an aneurysm of the anterior communicating artery. Our patient had a posterior communicating aneurysm. During her two months in hospital her nutrition was poor because she was reluctant to eat and because of the periods of unconsciousness. She was not an alcoholic. Thiamine deficiency was detected by the red cell transketolase test. Her

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condition improved with the appropriate treatment, and she recovered completely in a month.

It is thus very important to exclude the complications mentioned above in a patient with subarachnoid haemorrhage before considering whether the patient is unfit for surgery. It is also clear that a non-alcoholic patient can develop profound nutritional deficiency, and it is essential to give a balanced diet with vitamin supplements to patients who are critically ill for long periods.

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USSR Letter

Aspects of male mortality

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"The system for protecting the people's health in the USSR, which is one of socialism's greatest achievements, has made possible a substantial improvement in the state of the population's health, the decrease of illness, the elimination of a number of previously widespread infectious diseases, a sharp reduction in general and infant mortality, and a significant increase in people's expectation of life." That statement occurs in the preamble to the legislation that currently governs the Soviet health service. It seems deeply ironic that, only a few years after the enactment of this code in 1969, the authorities discontinued the annual publication of all-Union data for infant mortality and for the average expectation of life at birth.

A declining trend

The latest figures for life expectancy published in the statistical yearbook *Narodnoe Khozyaistvo SSSR* relate to 1971-2. The figure for women then stood at 74 and for men at 64 years. To offer a comparison with just one other country, in the United Kingdom in 1971 expectation of life at birth was calculated to be 75.0 for women and 68.8 for men. It can be established without difficulty that, when the Soviet time-series was discontinued, a deterioration had already occurred in male mortality experience. As may be seen from the table, the trendline had started to decline from the high plateau of 66 years recorded for 1963-7.

This adverse trend could hardly have escaped the notice of relevant specialists, and in 1968 a warning note was sounded by the eminent demographer, Dr Boris Uralnis. His article entitled "Look after the men," which was first published in *Literaturnaya Gazeta*, rapidly became a national talking point as it was reprinted by local newspapers and received attention

from radio, television, and the cinema. Rather than commanding agreement, however, his main contention that greater care should be devoted to the health of the male population evoked responses ranging from downright hostile to frivolous or satirical. Somewhat wryly, it seems, Uralnis described that stormy reaction when he returned to his theme almost exactly ten years later. His "jubilee" article of 1978 appears to be the most revealing of near-contemporary sources that provide an official perspective on the male mortality experience, and what follows is largely derived from it.¹

Average life expectancy at birth in the Soviet Union 1938-72

Years	Men	Women
1938-9	44	50
1955-6	63	69
1957-8	64	71
1958-9	64	72
1960-1	65	73
1962-3	65	73
1963-4	66	73
1964-5	66	74
1965-6	66	74
1966-7	66	74
1968-9	65	74
1970-1*	65	74
1971-2	64	74

*Relates to second half of 1970 and first half of 1971. Sources: *Narodnoe Khozyaistvo SSSR* for various years.

That Uralnis broached the subject a second time in itself suggests that no improvement had occurred during the previous decade, and indeed he bluntly informs readers that "the problem has become more acute." Unfortunately, he fails to quantify the deterioration precisely by citing figures for life expectancy. Moreover, his statement that "according to the latest data, men live for ten years less than women" is clearly capable of more than one interpretation—it may refer to 1971-2 (the latest published data) or to a subsequent year. If the latter

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