

in our non-obstetric hospital we perform 12,000 anesthetics a year of which at least 2000 are spinal. The majority of Caesarean sections in our region are performed using spinal anesthesia.

Spinal anesthesia has fluctuated in popularity over the years and in different countries. The introduction of small diameter atraumatic spinal needles in the 1990s was accompanied by an increase in its use. Atraumatic needles have a tip in the shape of a pencil point that tends to part rather than cut the dura resulting in a marked decrease in the incidence of post spinal headache. Current data suggest that the use of a small (27 gauge) atraumatic needle reduces the headache rate to less than 0.5%. (Santanen *et al.*, 2004) Unfortunately, neurologists have been slow to adopt these needles (Arendt *et al.*, 2009), despite recommendations from the American Academy of Neurology (Armon and Evans, 2005). This may be due to the slight increase in technical difficulty with their use.

Anesthetists become skilled in this procedure as part of normal training. In particular, they are adept at following meticulous sterile techniques and are cognizant of the risks and complications. In addition to headache, these include rare complications such as bleeding, infection and neurological injury. Anesthetists are alert to the contraindications, such as abnormal clotting due to disease or more commonly due to the widespread use of anticoagulant and antiplatelet therapies, which are now so common among the elderly. Finally, anesthetists are able to perform blood patches to treat refractory post-spinal headache on the rare occasions it occurs.

It therefore seems most appropriate for anesthetists to be involved in performing lumbar punctures in CSF sampling clinics. The question of whether those receiving routine spinal anesthesia, should be given the option of having a CSF sample collected at the time deserves serious consideration, especially among the middle aged.

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Is there any additional evidence for the epidemiological transition hypothesis of elderly suicides?

A recent study reported the relationship between suicide rates in both sexes in the age bands 65–74 and 75+ years and the Gross National Domestic Product (GDP), a measure of socio-economic status, as being curvilinear (inverted U-shaped curve) and fitting the quadratic equation $y = a + bx - cx^2$ (where y is the suicide rate, x is the Gini coefficient and a , b and c are constants) (Shah, 2010). This relationship was explained using the epidemiological transition hypothesis (Shah and Bhat, 2010) and the explanatory model included the following sequence of events (Shah, 2010): (i) countries with low socio-economic status

have poorly developed healthcare system; (ii) a poorly developed healthcare system is associated with increased child mortality; (iii) increased child mortality rates result in reduced life expectancy; and (iv) reduced life expectancy leads to fewer people reaching old age, the age at which the risk of suicide is high. In order to provide support for this hypothesis other data sources related to socio-economic status, quality and quantity of healthcare services and life expectancy were examined.

Data on suicide rates in both sexes in the age bands 65–74 and 75+ years were ascertained from the World Health Organization website (<http://www.who.int/whosis/database/mort/table1.cfm>) for the latest five consecutive years. In order to minimize the effect of random annual variations in suicides rates, an annual average of the five years was used for data analysis (Shah and Coupe, 2009). The

methodology for ascertaining and calculating these suicide rates has been previously reported (Shah, 2009). The median (range) for the year of the suicide rate data was 2005 (1970–2007).

Two measures, other than GDP, of socio-economic status were considered: the Human Poverty Index (HPI) and the Gini Index/coefficient (a measure of income inequality). They were ascertained from the United Nations Development Program website (http://hdr.undp.org/en/media/HDI_2008_EN_Tables.pdf). The median (range) for the year of the Gini coefficient was 2000 (1990–2003). The probability at birth of surviving to the age of 65 years for both sexes for the years 2000–2005 was also ascertained from the same website.

Rates of immunization for tuberculosis (for 2004) and measles (for 2004), the percentage of births attended by skilled health personnel (for 1996–2004) and the number of physicians (per 100,000 population for 1990–2004) were used as measures of the quality and quantity of available healthcare services. These data were also ascertained from the United Nations Development Program website above.

The relationship between suicide rates and the Gini coefficient, a measure of income inequality, was examined with a curve estimation regression model in order to test the hypothesis that a curvilinear relationship (inverted U-shaped curve) fits the quadratic equation $y = a + bx - cx^2$ (where y is the suicide rate, x is the Gini coefficient and a , b and c are constants). The same exercise was repeated for the HPI.

The relationship between suicide rates and the probability at birth of surviving to the age of 65 years, rates of immunization for tuberculosis and measles, the percentage of births attended by skilled health personnel and the number of physicians (per 100,000 population) was examined by Spearman's correlation coefficient (ρ).

Data on suicide rates and the Gini coefficient were available for 66 countries. There was a statistically (at least at 0.05 level) curvilinear (inverted U-shaped) relationship between suicide rates in both sexes and both elderly age bands and the Gini coefficient fitting the quadratic equation $y = a + bx - cx^2$. However, there was no curvilinear relationship with HPI where a complete data set was only available for 39 countries.

There was a positive correlation between suicides rates in females aged 65–74 years ($\rho = +0.34$, $P = 0.002$) and 75+ years ($\rho = +0.22$, $P = 0.055$) and the probability at birth of surviving to the age of 65 years; there was no significant correlation with males in both age bands. Here a complete data set was available for 80 countries.

There was a positive correlation between suicides rates in males aged 65–74 years ($\rho = +0.51$, $P < 0.0001$), males aged 75+ years ($\rho = +0.56$, $P < 0.0001$), females age 65–74 years ($\rho = +0.51$, $P < 0.0001$) and females aged 75+ years ($\rho = +0.45$, $P < 0.0001$) and the percentage of births attended by skilled health personnel; here a complete data set was available for 77 countries. There was a positive correlation between suicides rates in males aged 65–74 years ($\rho = +0.46$, $P < 0.0001$), males aged 75+ years ($\rho = +0.46$, $P < 0.0001$), females age 65–74 years ($\rho = +0.51$, $P < 0.0001$) and females aged 75+ years ($\rho = +0.57$, $P < 0.0001$) and the number of physicians; here a complete data set was available for 82 countries. However, there were no significant correlations between suicide rates in both sexes in both elderly age bands and rates of immunization either for tuberculosis or measles. Here a complete data set was available for 59 countries for tuberculosis and 82 countries for measles.

The curvilinear relationship between suicide rates in both sexes in both age bands and the Gini coefficient is consistent with the previously proposed epidemiological transition hypothesis of elderly suicides, but the absence of this relation with HPI is at variance with this hypothesis, although the latter was based on a significantly smaller sample. The positive correlations between suicide rates in both sexes in both elderly age bands and the percentage of births attended by skilled health personnel and the number of physicians is also consistent with the epidemiological transition hypothesis of elderly suicides. However, the absence of this relationship with rates of immunization for tuberculosis and measles is at variance with the epidemiological transition hypothesis. The positive correlation between suicide rates only in females in both age bands and the probability at birth of surviving to the age of 65 years is partly consistent with the epidemiological transition hypothesis.

Overall, the findings provide mixed evidence in support of the epidemiological transition hypothesis of elderly suicides.

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The utility of questionnaires in cognitive and functional assessment in Alzheimer's disease

Alzheimer's disease (AD) manifests clinically with an insidious onset and slow but progressive cognitive impairment. The clinical picture of AD can be classified into cognitive and behavioral changes. The initial deficit usually manifests as an amnesic syndrome which may progress very gradually for several years before impairment in other cognitive domains, such as language, semantic memory and visuospatial function, becomes apparent (Hodges and Patterson, 1995).

The guidelines issued by the National Institute of Health and Clinical Excellence (2006) recommended the use of memory testing such as the Mini-mental State Examination (MMSE) and functional assessment such as the Bristol Activity of Daily Living (B-ADL) scale or the Blessed Dementia Rating Scale (BDRS) in patients with dementia.

Our aim in this study was to assess the usefulness of questionnaires in the assessment of a sample of AD cases referred to the memory clinic services as recommended by the NICE guidelines.

Seventy participants took part in the study. They were selected from memory clinics which met NINCDS-ADRDA criteria for mild late-onset probable AD. Questionnaires were used to aid the diagnosis and clinical picture. The study was approved by the Local Research Ethics Committee.

The mean age of the sample was 79 years (range = 66–94, SD = 6.1), and 61% of the subjects were female. The mean time since onset of memory problem was 1.9 years (SD = .97). Seventeen percent (N = 12) of subjects used a hearing aid and 8% (N = 6) wore spectacles. All subjects were mobile with no abnormalities.

All subjects scored 0 on the Neuropsychiatric Inventory and Webster Extrapyraxidal Symptoms scales, excluding any other pathology such as Parkinson's disease, dementia with Lewy bodies and vascular brain incidents. All subjects scored 0–1 on

the Geriatric Depression Scale, which excluded the presence of depression.

The MMSE was used to screen the cognitive functions of all participants. The mean MMSE score was 23.30 (range = 19–26, SD = 2.87). Mann-Whitney U test was used to test the relationship between gender and MMSE and it showed no significant difference (U = 36.00, $p > 0.05$). Multiple regression analysis showed no correlation between age and MMSE ($F = -0.116$, $t(68) = -0.961$, $p > 0.05$).

The mean score for total Cambridge Mental Disorders of the Elderly Examination (CAMDEX) was 1.30 (SD = 0.66). χ^2 test by gender and CAMDEX showed no significant difference ($\chi^2(1, 70) = 3.657$, $p > 0.05$). The mean B-ADL score was 2.40 (SD = 1.31). χ^2 test showed no significant relationship between B-ADL and gender ($\chi^2(1, 70) = 3.200$, $p > 0.05$).

Correlation analysis shows a significant negative correlation between MMSE, and years since onset, $r = -0.444$, $p < 0.05$. A highly significant positive correlation was found between year since onset of dementia and total B-ADL ($r = 0.778$, $p < 0.01$). There is also a highly significant correlation between total CAMDEX and the BDRS ($r = 0.681$, $p < 0.01$). Repeated measure ANOVA showed no significant main effect for age. However, there was a significant relationship between gender and B-ADL ($F(1, 1) = 6.293$, $p < 0.05$) and gender and total CAMDEX ($F(1, 1) = 4.702$, $p < 0.05$).

Cognitive, psychiatric and functional assessment has important implications for the management of AD including planning for services and the use of cholinesterase inhibitors. The five areas that require assessment (and periodic reassessment) in a patient with AD are daily function, cognition, comorbid medical conditions, and disorders of mood and emotion, and caregiver status (Cummings *et al.*, 2002).

In our study, correlation analysis shows a significant correlation between years since onset of memory problem and both MMSE, and total B-ADL. This means that the longer subjects have had the illness and the severer the cognitive decline, the