

The prevalence of hyponatraemia and mortality in lung cancer patients

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OBJECTIVES

To estimate the prevalence and clinical significance of hyponatraemia in patients with lung cancer.

METHODS

Methods: The data were obtained from Hospital Registry. The serum sodium (SNa) on diagnosis was used for statistical comparisons. Normonatraemia is defined as SNa 135 to 144 mmol/L, Hyponatraemia <135 mmol/L Hypernatraemia >145 mmol/L. The data was analysed for small cell (SCLC), non small cell (NSCLC) and unknown group where histological diagnosis was not possible due to clinical reasons. Data analysis by Stata version 12.1.

RESULTS

The study population was 314 (57.3% male and 42.7%female).

There were 16.4% SCLC, 60.1% NSCLC and 23.5% Unknown group.

The sex distribution in SCLC - 52.9% males and 47.1% females

NSCLC - 59.4% males and 40.6% females and Unknown 56.2% males and 43.8% females.

The mean age in SCLC 69.1+10.2, NSCLC 69.7+9.7 and unknown 70.3+13.8. (p=0.84). The overall incidence of hyponatraemia, SNa <135 mmol/L was 37.6%.

The incidence of hyponatraemia was higher in SCLC than other 2 groups but not statistically significant (p=0.09) (SCLC 49.0%, NSCLC 33.2%, Unknown 41.1%). Analysis according to severity of hyponatraemia between groups.

Normonatraemic (135 --144) 60.5%, Mild (130 - 134) 21.7%, Moderate (120 - 129) 15.3%, Severe (< 120) 0.6% and Hypernatraemia (>=145) 1.9% Distribution of hyponatraemia among groups were as follows:
SCLC Mild 27.5%, Moderate 21.6%, Severe 0% and in NSCLC: Mild 19.8%, Moderate 13.4%, Severe 0%.

The risk of death within 30 days was 43% higher in the hyponatraemic group than the normonatraemic , not statistically significant.

Normonatraemia 37.9%, Hyponatraemia 46.6%, Odds ratio (95% CI)1.43 (0.90, 2.28); p=0.13. The risk of death within 30 days in the mild and moderate groups increased by 46% and 27% respectively compared to normonatraemia but not statistically significant.

Within 30 days - Normonatraemia 117/190 (61.6%), Mild 36/68 (52.9%), Moderate 27/48(56.3%). Severe 0/2 Odds ratios: Normonatraemia 1.00, Mild 1.46 (0.83, 2.55) p=0.19, Moderate 1.27 (0.67, 2.42) p=0.46, Severe NA.

CONCLUSIONS

Hyponatraemia is a negative prognostic indicator in lung cancer patients.
Further studies are needed to see whether correction of hyponatraemia has any survival benefit.

