

“MORTALITY IN SIADH IS SIMILAR TO THAT IN NON-SIADH HYPONATRAEMIA; PRELIMINARY DATA”

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OBJECTIVES

Excess mortality in patients with hyponatraemia compared to eunatraemic patients with similar underlying conditions is well documented. However, it is not clear whether the mortality associated with syndrome of inappropriate antidiuretic hormone secretion (SIADH) is different to that associated with non-SIADH hyponatraemia (NSH). This is due to the lack of prospective studies addressing mortality in SIADH patients in hospital.

METHODS

We prospectively evaluated patients admitted with or developing hyponatraemia in a tertiary care hospital (pNa<130 mmol/l) between January – February, 2015. The patients were diagnosed with SIADH based on standard clinical and biochemical criteria (pNa, spot urine sodium, urine osmolality, 9-AM Cortisol and TFTs), and comorbid conditions including admitting diagnoses were obtained for all patients. Patients were classified as hypo, hyper or euvolaemic hyponatraemia using clinical and biochemical parameters. Statistics were performed using Mann-Whitney U, Student T, or Chi-square Tests, as appropriate. SPSS version 15, Chicago, Ill.

RESULTS (SIADH vs NSH)

180 patients were included. 89 (45 female) were classified as SIADH and 91 (45 female) as NSH.

CLINICAL DATA

Mean age was similar; SIADH 68 y (SD:15) vs NSH 72 y (SD:15), p=0.09.

BACKGROUND HISTORY

Congestive cardiac failure (6.7% vs 30.7%, $p<0.0001$), ischemic heart disease (17.9% vs 31.8%, $p=0.02$), atrial fibrillation (8.9% vs 30.7%, $p<0.0001$) and chronic kidney disease (Stage \geq III, 0% vs 16%, $p<0.0001$) were more prevalent in NSH (Table1) compared to SIADH patients.

LABORATORY DATA

pNa at admission was similar in SIADH (126 mmol/l, SD:5) vs NSH (126mmol/l, SD:3), p=0.68. Other laboratory results (Median (IQR)) are summarized in table 2. Mean 9-am Cortisol in SIADH group was 482 nmol/l (IQR:412,578), and 21% were receiving therapeutic glucocorticoids. One patient with COPD had a subnormal post synacthen peak cortisol of 363 mmol/l due to recent oral prednisolone course. No patient had severe hypothyroidism.

DURATION OF HOSPITAL STAY AND MORTALITY DURING ADMISSION

Duration of hospital stay was 13 days (11) in SIADH vs 11 days (10) in NSH, p=0.55. Mortality rate was not different: 5.6% in SIADH compared to 10.9% in NSH (p=0.28) (Figure 1).

	SIADH	NON-SIADH	P value
AGE	68 (15)	72 (15)	NS
GENDER (F/M)	45/49	45/51	NS
HYPERTENSION	56/89	52/91	NS
DIABETES MELLITUS	11/89	18/91	NS
ACTIVE MALIGNANCY	21/89	11/91	NS (P=0.052)
COPD	17/89	15/91	NS
CONGESTIVE CARDIAC FAILURE	6/89	28/91	$p<0.0001$
ISCHAEMIC HEART DISEASE	16/89	29/91	$p=0.02$
ATRIAL FIBRILLATION	8/89	28/91	$p<0.0001$
CIRRHOSIS	5/89	5/91	NS
CHRONIC KIDNEY DISEASE	0/89	15/91	$p<0.0001$
COGNITIVE IMPAIRMENT	6/89	12/91	NS

Table 1. Characteristics of patients with hyponatraemia due to SIADH compared to Non-SIADH group. Results are expressed as mean(SD) for quantitative variables and number of patients with specific condition/total patients. NS: non-significant.

	SIADH	NON-SIADH	P value
pNa at admission	126 (5) mmol/l	126 (3) mmol/l	NS
pK	4 (3.6, 4.3) mmol/l	4.1 (3.7, 4.9) mmol/l	$p=0.003$
pUrea	5.3 (4.6,9) mmol/l	11.6 (7.4,18.8) mmol/l	$p<0.0001$
pCreatinine	64 (53.5,74) umol/l	128 (85,213) umol/l	$p<0.0001$
Spot UNa	53.5 (32,89) mmol/l	30 (18,59) mmol/l	$p=0.005$

Table 2. Laboratory results in patients with hyponatraemia due to SIADH and Non-SIADH group. Results are expressed as mean(SD) for pNa and median (Interquartile range) for pK,pUrea,pCreatinine and Spot UNa at the time of evaluation. NS: non-significant.

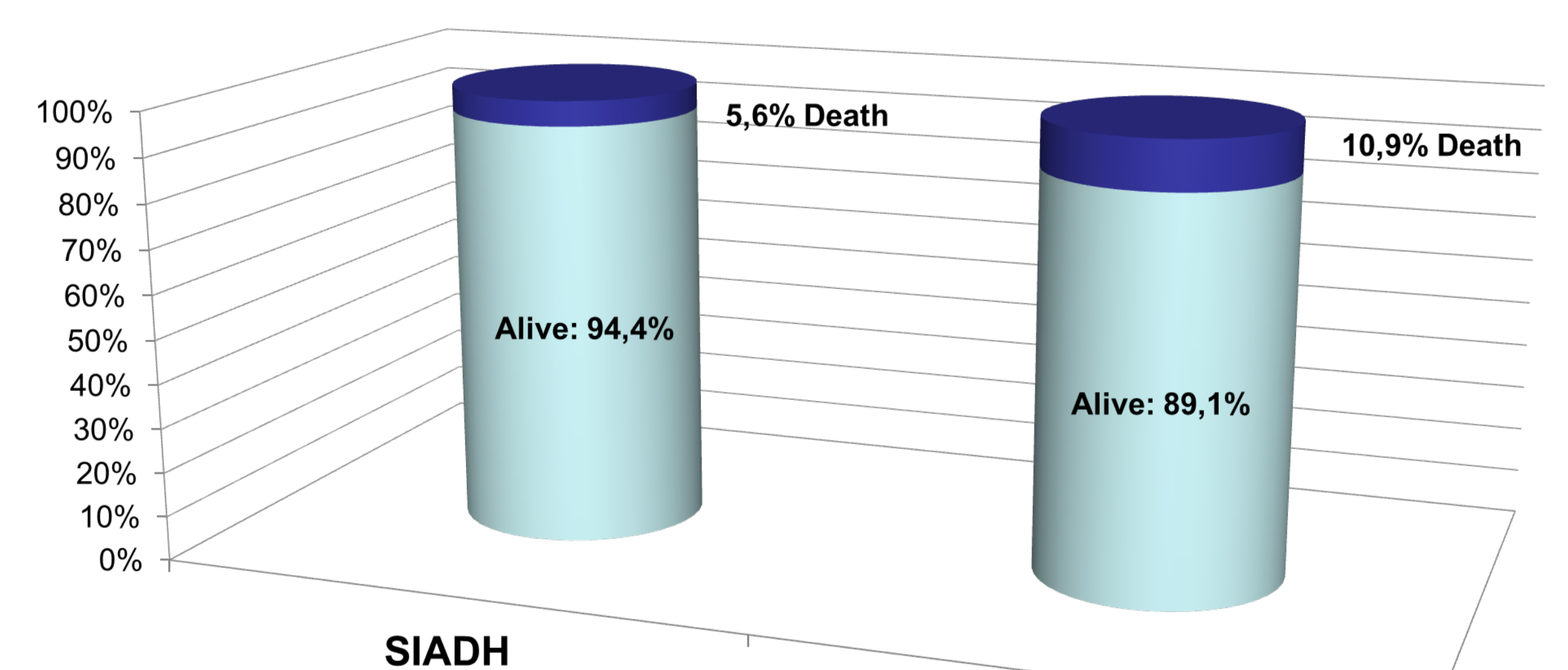


Figure 1. Mortality rate in patients with SIADH compared to Non-SIADH during hospital admission.

CONCLUSIONS

Preliminary results showed that mortality rate and length of hospital stay was similar in patients with SIADH compared to non-SIADH. However, larger studies are required to confirm these observations.

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