Letter to the Editor

Immediate insulin effect upon plasma anti-diuretic hormone concentration

Dear Sir,

In man, the intravenous (i.v.) injection of insulin causes an initial pre-hypoglycaemic depression of gastric secretion [1]. Noting that gastric secretory inhibition of short duration (30 min) has also been observed after i.v. anti-diuretic hormone (ADH) administration, we undertook to determine whether rapid ADH release by insulin may be the mediator of insulin's inhibition of gastric secretion by measuring plasma ADH levels after administration of insulin.

Eight men (52 to 70, mean age 61 years) free of diabetes, endocrine, CNS or gastro-intestinal diseases were studied. Following overnight fasting, a blood sample was drawn for ADH radio-immunoassay, using a double antibody bentonite extraction method [2]. A bolus of regular insulin (0.25 U/kg) was then given intravenously and three more blood samples were withdrawn at 5 min intervals for ADH assay. As shown in Table 1, pre-insulin ADH levels were in the normal human range of 0.4 to 5.3 μ U/ml in all patients, and slight increases following insulin administration were not statistically significant. Paired Student's *t*-tests for pre- and post-insulin ADH levels gave *p* values of 0.07 at 5 min, 0.08 at 10 min, and 0.19 at 15 min.

Our study suggests that sudden increases in plasma insulin do not result in an acute ADH release, and that ADH is unlikely to be a mediator in pre-hypoglycaemic (including gastric) response to insulin.

Yours sincerely,

T.K. Chaudhuri, S. Fink and H. Schapiro

Table 1. Pre and post-insulin anti-diuretic hormone (ADH) levels in eight subjects

Subjects	Pre-insulin ADH	Post-insulin ADH		
		5'	10'	15'
1.	0.9	1.2	1.0	1.2
2.	1.4	2.5	4.3	6.4
3.	0.8	1.4	1.0	1.2
4.	1.6	1.9	1.9	1.5
5.	1.1	2.0	1.9	2.4
6.	0.7	0.6	0.8	1.0
7.	1.4	1.2	3.5	1.4
8.	1.8	1.8	-	-

References

1. Spencer J (1973) Inhibition of gastric secretion by insulin. *Scand J Gastroenterol [Suppl.]* 21: 1-31
2. Skowsky WR, Rosenbloom AA, Fisher DA (1974) Radioimmunoassay measurement of arginine vasopressin in serum: development and application. *J Clin Endocrinol Metab* 38: 278-287

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Announcements

Sixth International Symposium of Nephrology

This symposium, entitled "Kidney, Proteins and Drugs", will be held on 1-3 June 1988 in Montecatini Terme, Italy. Emphasis will be placed on renal handling of proteins, pathophysiological mechanisms of proteinuria and nephrotoxicity of drugs. *For further information, please contact:* Dr. Claudio Bianchi, Centro Nefrologico, Clinica Medica Generale 2, University of Pisa, I-56100 Pisa, Italy.

2nd International Exhibit of Audiovisual Aids in Diabetes Information

This exhibit will take place in April 1990, in Ferrara, Italy. The exhibit will be organized by the Unit for Diabetes and Metabolic Dis-

eases of the USL (Local Health Authority) No. 31 of Ferrara and the Clinica Medica B at the University of Turin. The exhibit will be divided in two sections, one on lantern slides and the other on films and videos. All audiovisuals completed between 1 January 1985 and 31 December 1989 will be considered for presentation at the meeting.

For further information, please contact: Dr. Franco Tomasi, Servizio di Diabetologia, Arcispedale S. Anna, corso Giovecca 103, I-44100 Ferrara, Italy.