

0049

Insulin Lispro Changes Treatment Satisfaction Under Flexible, Functional Insulin Treatment.

KINGA HOWORKA^{5*}, JIRI PUMPRLA, CHRIS SCHLUSCHE, DORLI WAGNER, CLARE BRADLEY⁵. *Vienna, Austria, London, UK*

Our aim was to investigate and quantify the subjectively perceived advantages of insulin lispro *L* vs. regular insulin *R* for Functional Insulin Treatment (FIT), discriminating between basal, prandial and correctional use of insulin. 55 FIT-patients (age: $41,8 \pm 16,0$, diabetes duration: $16,0 \pm 9,6$, FIT-duration: $5,4 \pm 3,2$ years) who routinely make acute corrections to their blood glucose levels with extra insulin as required were recruited and randomized into two study groups. After a run-in period of 8 weeks, parallel periods of 11 weeks each (either with *L* or *R*) were compared. Psychological measures included status (S) and change (C) versions of the *Diabetes Treatment Satisfaction Questionnaire (DTSQ of C. Bradley 1994)* extended with items designed for FIT. The *DTSQ(C)* relates the present treatment satisfaction of the subject to that in the preceding phase of investigation. While the *R* group did not change significantly, the *L* group increased *treatment satisfaction* in *DTSQ(S)* (intragroup comparison) in total satisfaction ($p=0,01$), and specifically in all categories related to correctional (speed: $p<0,001$; accuracy: $p=0,001$; general: $p=0,001$) and prandial use of insulin (efficiency to deal with blood glucose after meals; necessary timing of injections; general; all p values $<0,001$). Increased predictability ($p=0,047$) and controllability ($p=0,022$) of blood glucose levels and increase in satisfaction with ability to perceive hypoglycaemia ($p=0,035$) were also found with lispro. *DTSQ(C)* augmented these perceived advantages with *L* (intergroup comparison) particularly in categories "satisfied-with-your-current-treatment" ($p=0,01$), convenience ($p=0,047$) and flexibility of treatment ($p=0,008$), understanding of diabetes /blood glucose course/ ($p=0,043$), and "wish-to-continue-this-kind-of-treatment" ($p=0,006$). HbA_{1c} decreased significantly with *L* from $7,5 \pm 0,9$ to $7,2 \pm 1,0$ ($p=0,049$), while remaining unchanged with *R* ($p=0,9$). Percentage of low blood glucose values tended to decrease with *L* ($p=0,06$). Insulin lispro improves treatment satisfaction under flexible, functional insulin use while reducing HbA_{1c} .