

Glitazones are effective and well-tolerated in routine diabetological practice

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Background and Aims: Pioglitazone and Rosiglitazone are thiazolidinediones with insulin sensitising properties approved in the EU for combination therapy with either metformin or sulfonylurea. In controlled clinical phase III studies significant reductions of both peripheral and hepatic insulin resistance could be observed. In consequence consistent and sustained improvements of glycaemic control as well as diabetic dyslipidaemia was documented. There is only limited data available investigating efficacy, safety and tolerability in routine diabetological practice. **Materials and Methods:** 111 patients with type-2-diabetes mellitus (T2DM) were followed in a monocentric observational study. 73 and 38 patients have been treated with Pioglitazone (PIO, 30 mg od.) and Rosiglitazone (ROSI, n= 27, 4 mg od.; n = 11, 8 mg od.) for 12 ± 7 months. Results were analysed descriptively as last observation carried forward (LOCF) **Results:**

Parameter	Glitazone		Change to BL	p-Value
	Before	LOCF		
HbA1C (%)	7.4 ± 1.9	6.3 ± 1.1	$- 1.1 \pm 1.6$	<0,001
Fasting glucose (mg/dl)	157 ± 47	117 ± 25	$- 41 \pm 41$	<0,001
Postprandial glucose (mg/dl)	204 ± 56	130 ± 29	$- 74 \pm 54$	<0,001
C-peptide (ng/ml)	5.1 ± 2.4	3.4 ± 1.6	$- 2 \pm 2.8$	<0,001
HDL-cholesterol (mg/dl)	46.7 ± 11.2	$49,1 \pm 11,3$	$2,5 \pm 9,0$	0,004
Weight (kg)	98.7 ± 22.2	$99,4 \pm 21,9$	1.6 ± 10.1	0,006
ALT (U/L)	18.7 ± 13.3	12.1 ± 5.9	$- 6.7 \pm 11.5$	<0,001

No significant differences could be observed between PIO and ROSI beside a significant ($p = 0.04$) change in triglycerides: $- 65.8$ mg/dl (PIO) vs. $- 5.1$ mg/dl (ROSI). Treatment was well-tolerated. Remarkable less weight gain was observed compared to the published US studies for PIO and ROSI. No hepatic or cardiac adverse drug reaction occurred. **Conclusions:** Thiazolidinediones target different components of the insulin resistance syndrome leading to an overall improved metabolic control. In addition significant changes of triglyceride levels could be detected for PIO. Therefore the beneficial clinical effects of glitazones known from phase III studies could be confirmed in patients with T2DM treated in routine diabetological care.