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Effectiveness of Liraglutide in Routine Clinical Practice: Six Months Follow-Up Data from India

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Aim: Liraglutide Effect and Action in Diabetes (LEAD) trials have reported the benefits of Liraglutide in clinical trial setting. The objective of this case report analysis was to evaluate the effectiveness of Liraglutide in routine clinical practice.

Methods: Case reports of type 2 diabetes patients receiving Liraglutide for at least six months were identified from three centers located in different parts of India. Change in clinical and laboratory parameters from baseline was assessed.

Results: Demographic features of 48 patients identified for analysis; mean age: 50.8 yrs; mean duration of diabetes: 8.9 yrs; mean body weight: 90.4 kgs; mean BMI: 33.1 kg/m^2; mean waist circumference: 100.1 cms and mean HbA_{1c}: 8.5%.

At baseline one patient was drug naïve. Anti diabetic medication profile at baseline was as follows: 1 OAD, 5 (10.42%); 2 OADs, 21 (43.75%); 3 OADs, 13 (27.08%); 4 OADs, 8 (16.67%); incretin therapy, 23 (47.92%); insulin therapy, 30 (62.5%); average daily insulin dose, 42.3 U. All patients were initiated with Liraglutide 0.6 mg/day, 20 (41.67%) patients each were uptitrated to receive 1.2 mg/day or 1.8 mg/day while 8 (16.67%) patients received 0.6 mg/day throughout six months.

Mean HbA_{1c} reduced to 7.5% by 3rd month and 7.1% by 6th month. There was clinically significant improvement in clinical and laboratory parameters as shown in **Table 1**. At month six, the anti diabetic drug profile was as follows: No OAD, 2 (4.17%); 1 OAD, 25 (52.08%); 2 OADs, 18 (37.5%); 3 OADs, 3 (6.25%); insulin therapy, 27 (56.25%). Average daily insulin dose requirement was reduced to 24.1 U.

Conclusion: Present data reported that Liraglutide initiated even in patients with longer duration of diabetes and receiving multiple OADs, provided clinically significant improvements in metabolic parameters. In combination of therapy, Liraglutide reduced exogenous insulin requirement by approximately 50%.

Table 1. Improvement in Clinical and Laboratory Parameters

Parameter	Baseline	At 3 months	Change at 3 month	At 6 months	Change 6 month
Body weight (kgs)	90.4	86.3	– 4.1	84.0	– 6.4
BMI (kg/m^2)	33.1	31.6	– 1.5	30.8	– 2.3
Waist circumference (cms)	100.1	98.1	– 2	95.1	–5
SBP (m mHg)	135.5	131.1	– 4.4	128.3	– 7.2
DBP (m mHg)	80.1	80.0	– 0.1	79.3	– 0.8
FPG (mg/dL)	175.4	138.8	– 36.6	118.3	– 57.1
PPG (mg/dL)	234.5	183.6	– 50.9	162.9	– 71.6
Total cholesterol (mg/dL	182.6	167.2	– 15.4	158.6	– 24
HDL (mg/dL)	40.2	41.6	1.4	42.8	2.6
LDL (mg/dL)	107.7	88.9	– 18.8	80.4	– 27.3
TG's (mg/dL)	178.1	143.4	– 34.7	131.5	– 46.6
Serum creatinine (mg/dL)	1.0	1.0	00	0.9	– 0.1
Urine micro-albumin (mg/dL)	51.4	27.3	– 24.1	19.9	– 31.5