SAROGLITAZAR IN NON-ALCOHOLIC FATTY LIVER DISEASE

Joshi Shashank[1], Sound Ruby[1], Saboo Banshi[2], Chawla Rajeev[3], Bhandari Sudhir[4]

1. Joshi Clinic , Mumbai, India; 2. Diacare, Ahmedabad, India; 3. North Delhi Diabetes Centre, New Delhi, India; 4. SMS College, Jaipur, India

Late Breaker Abstract; Poster no. 1311

Introduction

- Non-alcoholic fatty liver disease (NAFLD) is emerging as an important cause of liver disease in India.
- Urbanization leading to sedentary life style and fat rich diet, and a higher inherited tendency for diabetes mellitus makes Indians more prone to metabolic syndrome or insulin resistance and its manifestations such as NAFLD.[1,2,3]
- Saroglitazar is the world's first commercially available dual PPAR α and γ agonist which is approved for diabetic dyslipidemia and hypertriglyceridemia in type 2 diabetes not controlled by statin therapy.
- PPAR-α action of Saroglitazar improves lipid parameters and PPAR-γ action improves insulin sensitivity.[4]
- Phase-3 trials of saroglitazar have proved its efficacy in improving lipid and glycemic paramaeters.[5,6]

Objective

- To evaluate the safety and efficacy of saroglitazar in patients with non-alcoholic fatty liver disease (NAFLD) associated dyslipidemia.

Methods

- This is a single centre, single arm, prospective, open label study of saroglitazar.
- Patients with type 2 diabetes and associated dyslipidemia were screened for the presence of NAFLD through ultrasound elastography (fibroscan), patients who had sonographic evidence of NAFLD were included in this study.
- Total 221 patients with type 2 diabetes, dyslipidemia and NAFLD were identified and included in this study.
- All patients were on on-going antidiabetic medications.
- Saroglitazar 4mg once daily was initiated in all patients and follow-up was done at 12 week and 24 week period.
- Standard lipid lowering and anti-diabetic as per usual care were continued.
- The changes in laboratory parameters from baseline to 24 week follow up were statistically evaluated using paired “t” test.

Results

Table 1. Baseline demographics (n=221)

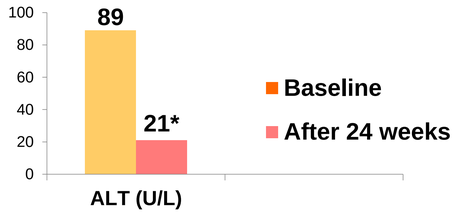
Mean age, years	58
Male patients, n(%)	129 (58%)
BMI (kg/m2)	28.9
Patients on statin therapy, (%)	48%
Mean duration of diabetes (years)	6.5

Table 2. Change in lipid and glycemic parameters after 24 weeks follow-up

Parameter	Baseline	After 24 weeks	P Value
Triglycerides (mg/dL)	321	129	P<0.001
HbA1c (%)	8.9	8.1	P<0.001

Values are expressed as Mean

Figure 1. Change in liver enzymes at 24 weeks follow-up



*P<0.0001 vs. baseline

- At 24 weeks follow-up:
  a. 86 patients out of 221 showed sonographic improvement in fatty liver.
  b. 68 patients out of 221 showed normalization of liver enzymes.
- No major adverse event reported during follow up.

Discussion

- Currently all therapies of NAFLD and NASH are experimental.
- Saroglitazar has been found to be safe and effective in pivotal phase 3 randomized, controlled clinical trials conducted in patients with hypertriglyceridemia in type 2 diabetes.
- In current study, 39% patients of diabetic dyslipidemia showed improvement in fatty liver on fibroscan evaluation.
- A biopsy driven randomized, controlled clinical trial is required to establish the efficacy of saroglitazar in patients with NAFLD and NASH

Conclusion

- 24 weeks treatment with saroglitazar 4 mg once daily significantly improves liver enzymes and fibroscan findings along with lipids and glycemic parameters in patients of NAFLD with dyslipidemia in type 2 diabetes.
- Saroglitazar can be a potential therapeutic option for the treatment of NAFLD and NASH associated with metabolic syndrome.

Bibliography

1. Nutrition. 2004;20:482–91.
2. J Assoc Physicians India. 2004;52:137–42.
3. Diabet Med. 2003;20:220–4.
4. Semin Liver Dis. 2001;21:17–26
5. J Diabetes Sci Technol. 2014 Jan 16;8(1):132-141
6. Diabetes Technol Ther. 2014 Feb;16(2):63-71