Impact of Socioeconomic Status on the Prevalence of Complications in Type 2 Diabetes in Indian Population: a Systematic Review

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INTRODUCTION

- Type 2 diabetes mellitus (T2DM) is a global burden: about 382 million people have diabetes in the world.
- India has about 65.1 million diagnosed diabetics.
- India is set to become the diabetic capital of the world: The WHO projects that India will have about 83 million diabetics – the highest in the world – by 2025.1

Complications of uncontrolled DM include conditions involving almost all body systems, specially cardiovascular, ocular, neurological and renal systems.

Diabetes is a costly condition: it is estimated that in India, on an average, 1/4th of the total family income is allocated to the patient care in a low-income family with one diabetic adult.

OBJECTIVE

To determine the association between socioeconomic status (SES) and complications associated with Type 2 Diabetes Mellitus in India.

MATERIALS AND METHODS

- Literature search was conducted in databases such as PubMed, EMBASE and the Cochrane library without any restrictions.
- References of the included studies were screened for additional studies.
- Observational studies focusing on association between SES and T2DM patients were included.
- The quality of the studies was assessed using the Newcastle-Ottawa scale.
- Two authors independently performed the study selection, data extraction and the quality assessment process.
- A third author reviewed the output and adjudicated discussions in case of disagreement.

Newcastle-Ottawa Scale

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RESULTS

- One study by Rani PK et al., reported approximately three fold higher risk of developing visual impairment in diabetic subjects with low SES [odds ratio (OR), 2.91; 95% confidence interval (CI), 1.24-6.85].
- A study by Bansal D et al., reported significantly higher prevalence of diabetes peripheral neuropathy in lower SES (48.4%) group compared to upper SES group (10.2%) (p<0.001).
- The risk of cataract was higher among diabetes subjects with low SES group, when compared to higher SES group (OR, 1.67; 95% CI, 1.10 to 2.54) in a study published by Raman R et al.
- Bansal D et al., focusing on only newly diagnosed type 2 diabetes patients, demonstrated no significant differences across all SES groups in the occurrence of any form of microvascular complications.

DISCUSSION

- Diabetes is an expensive condition.
- In USA, it is estimated that the annual cost of diabetes is 91.8 billion dollars.1
- This includes 49% direct and 51% indirect costs.2
- In 2009, each person with diabetes in the US spent $11,700 compared to $4,400 spent by each person without diabetes.3
- In the West Pacific Region, WHO has reported that around 16% of all hospital costs are related to diabetes.4
- Diabetes is a chronic condition which requires lifelong medication.5
- Thus, people with lower socio-economic status who cannot afford the expenses associated with diabetes can be expected to be under-treated.
- With this idea, the present study was performed to assess whether diabetics from lower socio-economic status are associated with a higher burden of diabetes related complications.

CONCLUSIONS

- We found very limited evidence regarding the association between socioeconomic status and diabetes complications.
- There is a need for educating patients with low SES to prevent long term complications in Indian T2DM patients.
- More observational studies are required to be conducted in the future in this context.

REFERENCES