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Dyslipidemia as a risk factor for erectile dysfunction in type-2 diabetes mellitus patients

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Objective: Studies have reported an inverse correlation between low levels of HDL cholesterol and increased risk of ED. To expand our knowledge on modifiable risk factors of ED within diabetic patients and dyslipidemia, we conducted a cross-sectional observational study.

Method: The study involved 813 males (20-69 years) with type-2 diabetes. Subjects were recruited from outpatient and inpatient department in Bangladesh from Bangladesh Institute of Research and Rehabilitation in Diabetes. Sexual function was evaluated with the International index of erectile function after translation into a Bengali version and validated under proper validation protocol.

Result: The mean cholesterol level of the sample was 184.5±41.5 mg/dl with 37% having levels higher than normal. Raised levels of HDL and LDL were found in 31% of subjects and elevated triglyceride levels were present in 57% of participants. The diabetic subjects with ED in the study were significantly older (p=0.000) and had suffered from diabetes for a longer duration of time (p=0.000). Independently abnormal levels of cholesterol (P=0.000), HDL (P=0.000), LDL (P=0.000) and triglyceride levels (P=0.000) all proved to be significant determinants of ED in the study population (table). Increased diabetes control was also found to be significantly associated with ED in the study.

Conclusion: Dyslipidemia was found to have the most significant risk associated with increased ED with the lipoproteins of lowered HDL and increased LDL levels demonstrating substantial influence of ED risk in diabetic patients.

Recent Publications

1. Naser A M, Unicomb L, Doza S, Ahmed K M, Rahman M, Uddin M N, Quraishi S B, Selim S, Shamsudduha M, Burgess W, Chang H H, Gribble M O, Clasen T F and Luby SP (2017) Stepped-wedge cluster-randomized controlled trial to assess the cardiovascular health effects of a managed aquifer recharge initiative to reduce drinking water salinity in southwest coastal Bangladesh: study design and rationale. *BMJ Open*; 7: e015205.
2. Chowdhury S H, Karim N M, Selim S, Ahmed F, Azad A K, Makshud S A, Rahman M F U and Chowdhury M A J (2017). Risk of depression among Bangladeshi type 2 diabetic patients. *Diabetes Metab. Syndr.*; 1(2): S1009-S1012.

Biography

Shahjada Selim has his expertise in endocrinology especially in diabetes, obesity and sexual disorders. He has obtained his MBBS degree from Rajshahi Medical College, Bangladesh; MD (Endocrinology and Metabolism), BIRDEM Academy under Dhaka University and FACE in 2016. He is currently working as an Assistant Professor in the Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh. He has more than 40 articles published in the international reputed journals. He has also published four books in Bengali on diabetes and thyroid disorders.

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Table: Factors associated with ED

Variable	No ED Freq (%)	ED Freq (%)	Adjusted OR (95% CI)*	P value
Dyslipidaemia			Referent	
Dyslipidaemia	178 (33.8%)	349 (66.2%)	6.48 (4.28-9.79)	0.000
Cholesterol			Referent	
Raised	86 (33.1%)	174 (66.9%)	2.34 (1.65-3.34)	0.000
HDL			Referent	
Raised	25 (10.9%)	204 (89.1%)	12.47 (7.62-20.40)	0.000
LDL			Referent	
Raised	26 (11.4%)	203 (88.6%)	11.75 (7.23-19.11)	0.000
TG			Referent	
Raised	136 (32.2%)	287 (67.8%)	3.81 (2.68-5.43)	0.000

* Adjusted for age, duration of diabetes, education and income.