

()

e-mail: emrc@mni.ac.ir

HbA1c

() % /

% /

HbA1c

BMI

ⁱ(ADA)

)

(% -

HDL-C

ⁱ(BMI)

Seca

()

()

ADA

(× cm bladder) × cm

)

(

%

cc

(HbA1c)

ⁱⁱ(GTT)

cc

cc

Chem Enzyme

GOD-PAP

HDL-C

()

Chem Enzyme

CHOD-PAP

HDL-C

() Pars Azmoun

Chem Enzyme

GPO-PAP

[LDL-C

LDL-C .

HbA1c

= Chol-(TG/5+HDL-C)

cc EDTA

Ion Exchange Chromatography

DS5

i- Body mass index

ii- Glucose tolerance test

iNCEP (ATP III)

()

-LDL

HDL-C

()

/ mmHg
HbA1c ADA

iiJNC

%

/

LDL-C

HDL-C

Epi Info 6.04 SPSS

p

/

(% /)

()

ECG

(% /)

HbA1c

(% /)

(%)

(ECG)

)

() % /

(

() % /

GTT

% /

() % /

()

GTT

i-National cholesterol education programs adult
treatment panel

ii- Seventh report of the Joint National Committee

	BMI	HbA1c	LDL-C	HbA1c
Baseline	28.5 (SD 3.2)	8.5% (SD 1.2)	180 mg/dL (SD 40)	8.5% (SD 1.2)
12 weeks	27.5 (SD 3.0)	7.5% (SD 1.0)	160 mg/dL (SD 30)	7.5% (SD 1.0)
24 weeks	26.5 (SD 2.8)	6.5% (SD 0.8)	140 mg/dL (SD 20)	6.5% (SD 0.8)
36 weeks	25.5 (SD 2.5)	5.5% (SD 0.5)	120 mg/dL (SD 15)	5.5% (SD 0.5)
48 weeks	24.5 (SD 2.2)	4.5% (SD 0.3)	100 mg/dL (SD 10)	4.5% (SD 0.3)
60 weeks	23.5 (SD 2.0)	3.5% (SD 0.2)	80 mg/dL (SD 5)	3.5% (SD 0.2)
72 weeks	22.5 (SD 1.8)	2.5% (SD 0.1)	60 mg/dL (SD 5)	2.5% (SD 0.1)
84 weeks	21.5 (SD 1.5)	1.5% (SD 0.1)	40 mg/dL (SD 5)	1.5% (SD 0.1)
96 weeks	20.5 (SD 1.2)	0.5% (SD 0.1)	20 mg/dL (SD 5)	0.5% (SD 0.1)
108 weeks	19.5 (SD 1.0)	0.5% (SD 0.1)	20 mg/dL (SD 5)	0.5% (SD 0.1)
120 weeks	18.5 (SD 0.8)	0.5% (SD 0.1)	20 mg/dL (SD 5)	0.5% (SD 0.1)

P value	±	±	
/	/ ± /	/ ± /	BMI1* (kg/m ²)
/	/ ± /	/ ± /	(mg/dL)
/	/ ± /	/ ± /	(%) 2* HbA1c
/	/ ± /	/ ± /	(mg/dL)
/	± /	/ ± /	(mg/dL)
/	/ ± /	/ ± /	(mg/dL) LDL 3*
/	/ ± /	/ ± /	4* (mg/dL) HDL
/	/ ± /	/ ± /	(mmHg)
/	/ ± /	/ ± /	(mmHg)

: * HDL-C Low Density Lipoprotein : LDL-C *

:HbA1c*

= Body Mass Index : BMI *

*

—

P value									
/	%	/	%	/					BMI
/	%	/	%				mg/dL		
/	%	/	%	/					HbA1c
/	%	/	%	/			mg/dL		
/	%	/	%				mg/dL		
/	%	/	%	/			mg/dL		LDL-C
/	%	/	%	/		mg/dL	mg/dL		HDL-C
/	%	/	%	/			mmHg		
/	%	/	%	/			mmHg		

BMI

ADA

✱

دisease	Prevalence
دېابېت	0.77
دېس لیپیدمی	0.48
فشارخون بالا	0.30

% /

%

% /

(% /)

%

%

% /

% /

% / .

(% /

%



References

1. Powers AC. Diabetes mellitus. In: Kasper DL, Fauci AS, Longo DL, Braunwald E, Hauser SL, Jameson JL, editors. *Harrison's principles of internal medicine*. 16th ed. New York: McGraw-Hill 2005. p. 2153-4.
2. American Diabetes Association. Standards of Medical Care in Diabetes—2006. *Diabetes Care* 2006; 29 Suppl 1: S5-10.
3. Harris MI, Hadden WC, Knowler WC, Bennett PH. Prevalence of diabetes and impaired glucose tolerance and plasma glucose levels in U.S. population aged 20-74 yr. *Diabetes* 1987; 36: 523-34.
4. Houston TP, Elster AB, Davis RM, Deitchman SD. The U.S. Preventive Services Task Force Guide to Clinical Preventive Services, Second Edition. *AMA Council on Scientific Affairs. Am J Prev Med* 1998; 14: 374-6.
5. The cost-effectiveness of screening for type 2 diabetes. CDC Diabetes Cost-Effectiveness Study Group, Centers for Disease Control and Prevention. *JAMA* 1998; 280: 1757-63.
6. Ohkubo Y, Kishikawa H, Araki E, Miyata T, Isami S, Motoyoshi S, et al. Intensive insulin therapy prevents the progression of diabetic microvascular complications in Japanese patients with non-insulin-dependent diabetes mellitus: a randomized prospective 6-year study. *Diabetes Res Clin Pract* 1995; 28: 103-17.
7. UK Prospective Diabetes Study (UKPDS) Group. Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* 1998; 352: 837-53. REF. 9
8. The Diabetes Control and Complications Trial Research Group. The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *N Engl J Med* 1993; 329: 977-86.
9. UK Prospective Diabetes Study (UKPDS) Group. Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* 1998; 352: 837-53.
10. CDC Diabetes Cost-effectiveness Group. Cost-effectiveness of intensive glycemic control, intensified hypertension control, and serum cholesterol level reduction for type 2 diabetes. *JAMA* 2002; 287: 2542-51.
11. American Diabetes Association. Standards of Medical Care in Diabetes—2006. *Diabetes Care* 2006; 29 Suppl 1: S33-43.
12. Karter AJ, Ferrara A, Darbinian JA, Ackerson LM, Selby JV. Self-monitoring of blood glucose: language and financial barriers in a managed care population with diabetes. *Diabetes Care* 2000; 23: 477-83.
13. Harris MI, Eastman RC, Cowie CC, Flegal KM, Eberhardt MS. Racial and ethnic differences in glycemic control of adults with type 2 diabetes. *Diabetes Care* 1999; 22: 403-8.
14. Oomen JS, Owen LJ, Suggs LS. Culture counts: why current treatment models fail Hispanic women with type 2 diabetes. *Diabetes Educ* 1999; 25: 220-5.
15. UKPDS 38. UK Prospective Diabetes Study Group. Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes. *BMJ* 1998; 317: 703-13.
16. Fagard RH, Staessen JA. Treatment of isolated systolic hypertension in the elderly: the Syst-Eur trial. *Systolic Hypertension in Europe (Syst-Eur) Trial Investigators. Clin Exp Hypertens* 1999; 21: 491-7.
17. Hansson L, Zanchetti A, Carruthers SG, Dahlof B, Elmfeldt D, Julius S, et al. Effects of intensive blood-pressure lowering and low-dose aspirin in patients with hypertension: principal results of the Hypertension Optimal Treatment (HOT) randomised trial. *HOT Study Group. Lancet* 1998; 351: 1755-62.
18. Curb JD, Pressel SL, Cutler JA, Savage PJ, Applegate WB, Black H, et al. Effect of diuretic-based antihypertensive treatment on cardiovascular disease risk in older diabetic patients with isolated systolic hypertension. *Systolic Hypertension in the Elderly Program Cooperative Research Group. JAMA* 1996; 276: 1886-92.
19. Haffner SM, Alexander CM, Cook TJ, Boccuzzi SJ, Musliner TA, Pedersen TR, et al. Reduced coronary events in simvastatin-treated patients with coronary heart disease and diabetes or impaired fasting glucose levels: subgroup analyses in the Scandinavian Simvastatin Survival Study. *Arch Intern Med* 1999; 159: 2661-7.
20. Bennett PH, Knowler WC. Definition, Diagnosis, and classification of Diabetes mellitus and Glucose Homeostasis. In: Kahn CR, Weir GC, King GL, Jacobson AM, Moses AC, Smith RJ, editors. *Joslin's Diabetes mellitus*. 4th ed. Philadelphia: Lippincott Williams & Wilkins 2005. P. 336-337.
21. Executive Summary of third Report of the National Cholesterol Education Program (NCEP), Expert panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults, (Adult Treatment panel III). *JAMA* 2001; 285: 2486-2997.
22. Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, et al; Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. National Heart, Lung, and Blood Institute; National High Blood Pressure Education Program Coordinating Committee. Seventh report of the Joint National Committee on Prevention, Detection,

-
- Evaluation, and Treatment of High Blood Pressure. Hypertension 2003; 42: 1206-52.
23. Edelman D, Olsen MK, Dudley TK, Harris AC, Oddone EZ. Quality of care for patients diagnosed with diabetes at screening. Diabetes Care 2003; 26: 367-71.
 24. O'Connor PJ, Gregg E, Rush WA, Cherney LM, Stiffman MN, Engelgau MM. Diabetes: how are we diagnosing and initially managing it? Ann Fam Med 2006; 4: 15-22.
 25. Heisler M, Smith DM, Hayward RA, Krein SL, Kerr EA. Racial disparities in diabetes care processes, outcomes, and treatment intensity. Med Care 2003; 41: 1221-32.
 26. Grant RW, Buse JB, Meigs JB; University HealthSystem Consortium (UHC) Diabetes Benchmarking Project Team. Quality of diabetes care in U.S. academic medical centers: low rates of medical regimen change. Diabetes Care 2005; 28: 337-442.

Original Article

The Quality of Care and Treatment in Diabetic Patients Newly Diagnosed by Screening

Teimouri A, Amini M

Endocrine and Metabolism Research center, Khorram Street, Jomhuri square, Isfahan, I. R. Iran
e-mail: emrc@mni.ac.ir

Abstract

Introduction: The importance of screening for diabetes mellitus is a controversial issue worldwide, its vitality is obvious when it leads to effective treatment for those identified at screening. This study was performed in Isfahan city to evaluate quality of care and treatment one year after diagnosis, in diabetic patients, newly diagnosed by screening. **Materials and Methods:** In this prospective study, 1640 adults were screened for diabetes in the Isfahan endocrine and metabolism research center, 2003-2004. Height, weight, blood pressure, plasma glucose, lipids, and HbA1c of diabetic patients who identified at screening, were measured twice, once, at time of diagnosis and then again one year later. The results of the two measurements were compared. Furthermore quality of care and treatment of patients were evaluated. **Results:** Eighty-three (5.06%) of 1640 adults, were diagnosed as having diabetes. The prevalences of dyslipidemia and hypertension among diabetic patients were 78.3% and 45% respectively. One year after diagnosis 77.1% of diabetic patients were treated for hyperglycemia, whereas 49.2% of dyslipidemic and 45% of hypertensive patients were treated for dyslipidemia and hypertension respectively. After one year, patients had significant improvements in BMI, plasma glucose, lipids and HbA1c but no improvements were seen in systolic and diastolic blood pressure. **Conclusion:** Diabetes screening is effective for detection of undiagnosed diabetes and improvement of glucose and control of other cardiovascular risk factors. It seems that quality of care and treatment, especially hypertension management, needs to be improved.

Key words : Screening, Care, Diabetes mellitus