



Diabetic Patients Presentation to all Specialities in A Tertiary Care Hospital

Dr K SIVA PRASAD	M.D. Associate Professor, Dept. of General Medicine, SVRRGGH, SRI VENKATESWARA MEDICAL COLLAGE, TIRUPATHI.
Dr B BALA SUBRAMANYAM	M.D. Assistant Professor, Dept. of General Medicine, SVRRGGH, SRI VENKATESWARA MEDICAL COLLAGE, TIRUPATHI.
Dr N KISHORE KUMAR	PG student, Dept. of General Medicine, SVRRGGH, SRI VENKATESWARA MEDICAL COLLAGE, TIRUPATHI.
Dr K SRAVYA SREE	PG Student, Dept. of General Medicine, SVRRGGH, SRI VENKATESWARA MEDICAL COLLAGE, TIRUPATHI.

ABSTRACT

The prevalence of diabetes is rising all over the world due to population growth, aging, urbanization and an increase of obesity and physical inactivity. Unlike in the West, where older persons are most affected, diabetes in Asian countries is disproportionately high in young to middle-aged adults. This could have long-lasting adverse effects on a nation's health and economy, especially for developing countries. The International Diabetes Federation (IDF) estimates the total number of people in India with diabetes to be around 50.8 million in 2010, rising to 87.0 million by 2030. The problem of mass diabetes is steadily increasing every day. India is said to be the "diabetes capital of the world". In this study we had chosen exclusively diabetic patients. We had selected total 244 diabetic patients for study in all departments of SVRRGGH, Tirupathi. In our study also the prevalence of the diabetes in young was increased i.e. 53.68 % in age group of 30 to 49 years. The increased incidence and prevalence of the diabetes in young is mainly due to decreased physical activity, obesity, environmental and genetic factors. There is no cure for diabetes prevention is the only modality to save from the diabetes.

KEYWORDS

INTRODUCTION:

No country is immune to diabetes; no country has all the answers to this common enemy. No country has yet managed to reverse the rising prevalence. Defeating diabetes will take every ounce of commitment and ingenuity that we can summons (A Ramachandran, JUNE 2010). with over 300 million people with diabetes now and 500 million expected to have diabetes by 2030, the global diabetes epidemic represents one of the major health and development challenges of the 21 st century ¹According to recent estimates, approximately 285 million people worldwide (6.6%) in the 20–79 year age group will have diabetes in 2010 and by 2030, 438 million people (7.8%) of the adult population, is expected to have diabetes ². During the period 1971–2000, studies from different parts of India reported a 10-fold increase in the incidence of diabetes in urban India (from 1.2% in 1971 to 12.1% in 2000) ³ Diabetes is a huge problem in India. It is estimated that 61.3 million people aged 20-79 years live with diabetes in India (2011 estimates). This number is expected to increase to 101.2 million by 2030 . The importance of protecting the body from hyperglycemia cannot be overstated; the direct and indirect effects on the human vascular tree are the major source of morbidity and mortality in both type 1 and type 2 diabetes. Generally, the injurious effects of hyperglycemia are separated into macro vascular complications (coronary artery disease, peripheral arterial disease, and stroke) and micro vascular complications (diabetic nephropathy, neuropathy, and retinopathy). It is important for physicians to understand the relationship between diabetes and vascular disease because the prevalence of diabetes continues to increase, and the clinical armamentarium for primary and secondary prevention of these complications is also expanding . Over time, this can cause problems with other body functions, such as your kidneys, nerves, feet, and eyes. Having diabetes can also put you at a higher risk for heart disease and bone and joint disorders. Other

long-term complications of diabetes include skin problems, digestive problems, sexual dysfunction, and problems with your teeth and gums . With this background we had chosen a cross sectional study of study the diabetic population to reveal the incidence and prevalence of diabetes in the different age and sex distribution in a tertiary care hospital.

MATERIALS AND METHODS:

Total 244 patients who were admitted to the all specialties of the SVRRGGH, Tirupathi in the month of March, 2016 were studied. Data was collected from the case sheets and written consent was taken from the each patient. Data was incorporated into Microsoft Excel 2010 and analyzed.

INCLUSION CRITERIA:

- 1) Age >18 years.
- 2) All type 2 Diabetes admitted to the all specialties.

EXCLUSION CRITERIA:

- 1) Age <18 years.
- 2) Type 1 Diabetes Mellitus.
- 3) Gynecology and Obstetrics patients.

RESULTS:

Total 244 admitted diabetic patients were studied in study. The male patients were 158 i.e. 64.75% and female population is 96 i.e. 36.26 %.

Table 1: sex distribution of the patients

gender	n	%
male	158	64.75
female	96	36.25

TOTAL	244	100
-------	-----	-----

Age distribution of the patients was found that total 53.68% of the diabetic patients were within the age group of 30 to 49 years i.e. 131 out of 244 patients. Among them 72 patients were male and remaining 49 patients were female population. With that we came to a conclusion that incidence of diabetes now a days increasing in the young population.

Table 2: Age distribution of the patients

S.No.	Age (years)	n	%
1	18 to 29	4	1.63
2	30 to 39	36	14.75
3	40 to 49	95	38.93
4	50 to 59	59	24.18
5	60 to 69	32	13.11
6	70 above	18	7.37
	Total	244	100

In our study we had taken only already diagnosed patients with Type 2 DM (15 (David K McCulloch, 2015)). RBS is the only parameter we had taken and plotted all the patients according to the initial Blood sugars. 94 patients out of 244 i.e. 38.52 % were found within the RBS levels of 100 to 199 mg/dl. High RBS levels were found in i.e. >400 mg/dl in 31 patient

and most of those were admitted with hyperglycemic metabolic complications to the medical wards.

Table 3: RBS at the time of presentation.

S.No.	RBS(mg/dl)	n	%
1	< 100	18	7.37
2	100 to 199	94	38.52
3	200 to 299	67	27.45
4	300 to 399	34	13.93
5	400 to 499	23	9.42
6	>500	8	3.27
	Total	244	100

Table 4: Specialty distribution of the patients.

S No	Specialty	n	%
1	Gen. Medicine	94	38.52
2	Gen. surgery	56	22.95
3	Orthopedics	38	15.57
4	Pulmonology	20	8.19
5	Ophthalmology	18	7.37
6	ENT	12	4.91
7	ID Ward	6	2.45
	Total	244	100

Among the 244 patients 94 patients were admitted to the medical wards with higher incidence of metabolic complications i.e. DKA¹, Uncontrolled Hyperglycemia, and HONK. In surgery wards 56 patients were admitted with macro vascular complications of the diabetes in the majority of the patients. 38 patients i.e. 15.57 were admitted in the orthopedic ward with the diagnosis of the bone fractures, but the direct cause of the diabetes does not contribute to the admission in these patients.

Table 5: patients presenting to the medical wards.

S.No.	Diagnosis	n	%
1	DKA	15	15.95
2	Uncontrolled Hyperglycemia	13	13.83
3	HONK	12	12.76
4	Fever with ID	12	12.76
5	CVA	10	10.63
6	CKD	09	9.57
7	CLD	08	8.51
8	Septicemia	05	5.31
9	Hypoglycemia ¹	05	5.31
10	Snake bite	03	3.19

11	Others	03	2.12
	Total	94	100

Table 6: patients presenting to the surgical wards.

S.No.	Diagnosis	n	%
1.	Diabetic ulcer	15	26.78
2.	Gangrene@ amputation	9	16.07
3	Hernia	8	14.28
4	Acute pain abdomen	8	14.28
5	Chronic pancreatitis	6	10.71
6	Hydrocele	5	8.92
7	Carcinoma	4	7.14
8	Others	1	1.78
	Total	56	100

Table 7: patients presenting to the pulmonology wards.

S.No.	Diagnosis	n	%
1.	PTB	8	40.00
2.	AE of COPD	5	25.00
3.	LRTI	4	20.00
4.	AE of Bronchial asthma	2	10.00
5.	Others	1	5.00
	Total	20	100

20 patients were admitted in the pulmonology ward with history of diabetes. Among them 8 patients i.e. 40 % of the patients were found to be diagnosed as pulmonary Tuberculosis¹¹. the overall incidence of the TB with diabetes¹², in our study is 3.26 % among the 244 patients.18 patients were admitted in the ophthalmology ward, among them 15 patients came for cataract surgery and diabetic retinopathy.12 patients were admitted in the ENT ward and 6 were admitted in the Infectious Disease Ward. Majority of the ENT admitted patients came for CSOM¹³ (Chronic Suppurative Otitis Media) and DNS¹ (Deviated Nasal Septum) surgery.

DISCUSSION:

Indian primary prevention studies have shown that T2DM can be prevented in persons of high-risk of developing the disease, by consistent lifestyle modification focused on improved physical activity and healthy diet. At present, there is an urgent need to translate the findings of the clinical trials into community levels programs. Cheaper and widely accessible methods of communication are required for motivating people to adhere to the preventive strategies. Use of information technology and telecommunication via cell phones may prove to be cost-effective communication strategies³. In diabetics it has been suggested that tuberculosis tended to occur predominantly in the lower lobes. A retrospective chart review was performed of all patients with a diagnosis of diabetes and pulmonary tuberculosis admitted to a health care facility to determine the presenting chest roentgen graphic location of tuberculosis. Multiple lobe involvement was the predominant chest roentgen graphic finding in both diabetics and non-diabetics with pulmonary tuberculosis. Since tuberculosis and diabetes frequently coexist in the population at risk for tuberculosis, clinicians should suspect tuberculosis in the diabetic with an abnormality on chest roentgenogram. Aggressive diagnostic measures and specific chemotherapy should be given and monitored to treat pulmonary tuberculosis¹¹. The incidence rate for DKA¹ varies with definition, age, and sex. The rate from population-based studies ranges from 4.6 to 8 per 1,000 diabetic persons per year. It is more common in young diabetic people and may be more common in women than men. The importance of protecting the body from hyperglycemia cannot be overstated; the direct and indirect effects on the human vascular tree are the major source of morbidity and mortality in both type 1 and type 2 diabetes. Generally, the injurious effects of hyperglycemia are

separated into macro vascular complications (coronary artery disease, peripheral arterial disease, and stroke) and micro vascular complications (diabetic nephropathy, neuropathy, and retinopathy). It is important for physicians to understand the relationship between diabetes and vascular disease because the prevalence of diabetes continues to increase in the United States, and the clinical armamentarium for primary and secondary prevention of these complications is also expanding . DKA may be the initial manifestation of diabetes in 20%-30% of cases. Incidence rates for HNC, LA, and hypoglycemia¹ are not available from population-based studies. Hypoglycemic events varied in the Diabetes Control and Complications Trial (DCCT) between the treatment groups . To prevent the complications and economic burden of the diabetes, it is better to prevent the diabetes with modification of our life style with increased physical activity, high intake of fiber diet, avoidance of refined carbohydrate diet and junk foods.

CONCLUSION:

The incidence of Type 2 DM in young is increasing worldwide, in India, in Andhra Pradesh also. In view of the proverb "prevention is better than cure ", is absolutely applicable to this common enemy. To prevent the complications and economic burden of the diabetes, it is better to prevent the diabetes with modification of our life style with increased physical activity, high intake of fiber diet, avoidance of refined carbohydrate diet and junk foods. Finally change the norm "India is the capital of diabetes " to "Incidence and prevalence is decreasing in India " .

LIMITATIONS:

1. Non investigative and treatment based study.
2. Gynecology and obstetrics patients were not included.
3. Type 1 DM patients were not included.
4. Study period is short duration.
5. No follow-up of the patients.

Reference :

1. IDF president, J. C. (2011). Diabetes - International Diabetic Federation.
2. A Ramachandran, A. D. (JUNE 2010). Current Status of Diabetes in India and Need for Novel Therapeutic Agents. *SUPPLEMENT TO JAPI • VOL. 58 , 7-9.*
3. Ambady Ramachandran, A. S. (2013). *Type 2 Diabetes in India: Challenges and Possible Solutions.* API.
4. Whiting, D. R. (2011). FACT SHEET: Diabetes in India. Arogya World, The global health organization.
5. Michael J. Fowler, M. (2008 Apr; 26(2):). Microvascular and Macrovascular Complications of Diabetes. American Diabetes Association, 77-82.
6. Michael J. Fowler, M. (2008 Apr; 26(2):). Microvascular and Macrovascular Complications of Diabetes. American Diabetes Association, 77-82
7. Fowler, M. (2011). Diabetic Complications. *U S National Library OF medicine.*
8. Howard Fishbein, D. a. (2007). *Acute Metabolic Complications.* Elsevier.
9. David K McCulloch, M. (2015). Clinical presentation and diagnosis of diabetes mellitus in adults. UPTODATE MEDICINE 14. MD, R. K. (2012). Deviated Septum Surgery and Turbinectomy (Septoplasty, Nasal Airway Surgery, Surgical Instructions). *MEDICINENET.COM.*
10. R D Hardern1, N. D. (Emerg Med J 2003). Emergency management of diabetic ketoacidosis in adults. *EMERGENCY MEDICINE JOURNAL*, 210-213.
11. Morris JT1, S. B. (1992 Aug;). Pulmonary tuberculosis in diabetics. *PUBMED.GOV*, 102(2):539-41.
12. Parvaneh Baghaei, M. M. (20 December 2013). Diabetes mellitus and tuberculosis facts and controversies. *Journal of Diabetes & Metabolic Disorders*, 12-58.
13. Peter S Roland, M., & Chief Editor: Arlen D Meyers, M. (n.d.). Chronic Suppurative Otitis Media Treatment & Management. *MEDSCAPE - INTERNET.*
14. Melissa Conrad Stöppler, M. (2014). Hypoglycemia. *MEDICINENET.COM*, 245-251.