

RESULTS

Five hundred patients were recorded with mean age of $58.7 \pm SD 1.49$ years and 64% male. The mean HbA1c at recruitment was $9.86 \pm SD 1.2\%$. More than 70% of patients were on insulin therapy. 22.4% had retinopathy, 23.2% had nephropathy and 10.4% had neuropathy. At latest follow-up, there was significant HbA1c reduction compared to initial recruitment ($1.23 \pm SD 2.7\%, p < 0.01$). There was a 5% mortality and 10% defaulter rates in the 3 years of follow-up. DOSC concept may seem ideal but many barriers were identified impeding its implementation.

CONCLUSION

Despite better HbA1c control, there are limitations in implementation of DOSC. Sustaining the provision of care requires optimal resources and manpower and maintenance of patient interest in diabetes care.

KEY WORDS

diabetes one-stop centre, diabetes, mortality

OA-D-15

PREVALENCE OF METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) COLONIZATION, RISK FACTORS AND ANTIBIOTIC SUSCEPTIBILITY PROFILE AMONG PATIENTS WITH ASYMPTOMATIC DIABETES MELLITUS TYPE 2

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Katrina Rodriguez-Asuncion, Maria Princess Kanapi, Gia Wassmer, Janice Caoili
Makati Medical Center, Philippines

INTRODUCTION

Infection is one of the major causes of increased morbidity and mortality in individuals with diabetes mellitus. One of the bacterial pathogens associated with these infections is the methicillin-resistant *Staphylococcus aureus* (MRSA). This is probably because diabetes mellitus is one of the significant risk factors for MRSA colonization. Colonization of the said organism may act as an endogenous reservoir which places carriers at a greater risk for future infection. This study aims to identify the prevalence and risk factors for MRSA nasal colonization among individuals with diabetes mellitus in our locality and to determine the antimicrobial susceptibility of this organism. This will guide clinicians in the prevention and proper treatment of MRSA-related infections.

METHODOLOGY

This is a prospective cross-sectional study which included adult Filipino patients with diabetes mellitus type 2. Nasal swab samples were obtained and analyzed for the presence of MRSA.

RESULTS

Among 103 diabetic patients screened for MRSA nasal colonization, the prevalence rate is 6.8%. History of antibiotic use showed a positive correlation with the presence of MRSA nasal colonization. The isolates exhibited resistance to benzylpenicillin/oxacillin (100%), clindamycin (42.9%), quinupristin/dalfopristin, vancomycin, and cotrimoxazole (14.3%).

CONCLUSION

The prevalence of MRSA in this population is higher compared with other Asian countries. Contrary to other studies, there were no diabetes related risk factors identified. In this population, history of antibiotic use plays a significant role in MRSA nasal colonization. Therefore, clinicians should have a high level of suspicion of possible MRSA caused infection in diabetic patients with history of antibiotic use. The presence of antimicrobial resistance to B-lactams, clindamycin, cotrimoxazole, and vancomycin should prompt clinicians to be cautious in prescribing such antibiotics especially in high risk patients wherein inappropriate or delayed treatment is detrimental.

KEY WORDS

diabetes mellitus type 2, methicillin resistant staphylococcus aureus, nasal mucosa, carrier state

OA-D-16

EFFECT OF EXTRA VIRGIN OLIVE OIL ON POSTPRANDIAL BLOOD GLUCOSE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Daphne Gayle Galang, Maria Jocelyn Isidro, Ma Cecilia Gonzales, Andrea Macabuag-Oliva
Section of Endocrinology, Diabetes and Metabolism, Department of Internal Medicine, Makati Medical Center, Philippines

INTRODUCTION

The burden of diabetes continues to rise despite the emergence of new medications. Hence, all possible treatment modalities including the use of our readily available herbs and oils are explored. Extra virgin olive oil (EVOO) is known for its cardiovascular effects and its effect on glucose lowering. However, there has been no study on the efficacy of extra virgin olive oil on glucose lowering among Filipino patients with Type 2 Diabetes Mellitus. The primary objective of this study is to determine whether a significant difference exists in the 2-hour postprandial blood glucose of meals containing EVOO and meals without EVOO in patients with Type 2 Diabetes Mellitus.

METHODOLOGY

Thirteen patients were included in this randomized controlled cross-over trial. They received a test meal with EVOO or no EVOO followed by a one week wash out period, in which the subjects were given the other intervention. The primary outcome is the trans-meal blood glucose, which is calculated as the percent change in 2-hour postprandial blood glucose.

RESULTS

In group A, there was a noted 88.55% increase in 2-hour post prandial blood glucose in taking meals with EVOO, compared to 72.11% change in meals without EVOO. The same was observed in Group B, where there was a 71.08% and 49.22% increase in 2-hour postprandial blood glucose in meals with EVOO and without EVOO, respectively. The difference was significant with a p-value of 0.044. Free fatty acids inhibit glucose transport and insulin secretion, this effect may be more predominant in Asian type 2 Diabetes Mellitus patients.

CONCLUSION

This study found that adding extra virgin olive oil on top of meals provided no additional benefit in terms of post-prandial glucose excursion.

KEY WORDS

diabetes mellitus, diet therapy, olive oil therapeutic use

OA-D-17

THE BENEFIT OF STRUCTURED ACTIVITY IN WOMEN WITH PREDIABETES

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Fatima Eliana

YARSI University, Jakarta Timur, Indonesia

INTRODUCTION

To determine the effect of structured physical activity on decreasing body fat, increasing muscle mass, decreasing HbA1c and LDL cholesterol levels and increasing HDL cholesterol.

METHODOLOGY

The research method is pre-experimental one group pretest posttest design. Subjects were told to conduct structured activities in gymnastics room of at least 60 minutes, 3 times a week, for 6 months. Research subjects were women aged 18-60 years who were members of Persadia gymnastics at the Islamic Hospital Pondok Kopi Jakarta. Examination of body fat and muscle mass percentage was done using the Bioelectrical Impedance Analysis (BIA) tool. Examination of serum HbA1c, LDL and HDL was done using the ELISA method.

RESULTS

This study initially included 80 subjects but there were 8 people who dropped out, statistical calculations were only carried out on 72 subjects. The results of this study showed a decrease in the average percentage of body fat by 0.526% ($P=0.15$), an increase in the average percentage of muscle mass by 24.6% ($P=0.02$), decrease in HbA1c of 0.2% ($p=0.22$) and LDL levels of 13 mg / dL ($p=0.61$) and an increase in HDL of 12 mg/dL ($p=0.05$).

CONCLUSION

Structured physical activity for at least 60 minutes, 3 times a week, for 6 months in women with prediabetes can increase muscle mass and HDL cholesterol levels. Structured physical activity was also beneficial in reducing body fat, HbA1c and LDL cholesterol in several research subjects, but it was not statistically significant.

KEY WORDS

structured physical activity, body fat, muscle mass, HbA1c, LDL cholesterol, HDL cholesterol

OA-D-18

EFFECT OF SPATHOLOBUS FERRUGINEUS EXTRACT ON BLOOD GLUCOSE LEVELS AND HISTOPATHOLOGY OF PANCREAS IN DIABETIC MALE RATS

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Fatima Eliana

YARSI University, Jakarta Timur, Indonesia

INTRODUCTION

To determine the ability of Spatholobus ferrugineus (SF) extract as an antidiabetic drug.

METHODOLOGY

The experimental study used 6 groups of male Sprague Dawley rats which were given SF extracts. The first group was the control group without induction of alloxan, the second group was composed of diabetic rats, the third group was composed of diabetic rats that received glibenclamide, the fourth group was composed of diabetic rats that received SF dose of 62.5 mg/kg bw, the fifth group received SF dose of 125 mg/kg bw, the sixth group received SF dose of 250 mg/kg bw. On day 15, blood samples were taken with cardiac puncture. Histology of pancreas was done by staining with HE.