

# Use of Complementary Medicine Amongst Diabetic Patients in a Public Primary Care Clinic in Ipoh

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## Summary

The use of Complementary Medicine (CM) amongst diabetic patients attending the Diabetes/Hypertension Clinic, Out Patient Department, Ipoh Hospital was studied. Forty-three patients were selected by systematic random sampling (1:5) over a one-week period starting 5/12/01. Data were collected by patient interview, from medical records and through a questionnaire. 56% were using CM together with conventional therapy. Most commonly used were herbal therapy, homeopathy and reflexology. The majority took CM daily with a mean duration of 7 years. Over half had subjective relief of pain with increased energy. Patients on CM or conventional therapy both showed poorly controlled FBS levels. There is a need to assess the effect of these therapies on diabetic outcome.

**Key Words:** Use of complementary medicine, Diabetes mellitus, Primary care, Eurycoma Longifolia, Morinda Citrifolia

## Introduction

The use of alternative therapy as unconventional health treatment is gaining considerable recognition and popularity worldwide. At present, it is not exactly clear why there is an increasing use of alternative forms of health care<sup>1</sup>.

In Europe as a whole 20-50% of the European population consult complementary medical practitioners<sup>2,3</sup>. In 1997, a survey in USA found the use of complementary medicine was 42.1%<sup>4</sup>. In Singapore it has been estimated that about 45% in the population surveyed has consulted a complementary medical practitioner in the past and about 12% of outpatients attending government hospital daily opt to see a complementary medicine practitioner<sup>5</sup>.

Despite lack of medical evidence to support their therapeutic efficacy the use of some forms of

alternative therapies have increased considerably. Some therapies are hypothesized to play a role in carbohydrate metabolism and diabetes mellitus. In the USA there was a study done to assess whether American Ginseng (*Panax quinquefolius L*) affects postprandial glycemia in human and there was a significant reduction ( $p < 0.05$ ) in postprandial glycemia in Type 2 Diabetes Mellitus<sup>6</sup>. A recent survey of diabetes educators listed the following as the most recommended and used therapy - physical activity, lifestyle diets, relaxation therapy, meditation, massage, herbal medicine, homeopathy, and megavitamin therapy<sup>1</sup>.

Diabetes mellitus is a common disease in Malaysia with an estimated prevalence between 6.3% to 14.6% and the majority of diabetics managed in the outpatient departments (OPD) are Type 2 diabetics<sup>7</sup>. With no known cure the emphasis of diabetic care/management

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is on morbidity reduction and prevention of complication. As far as is known about CM in Malaysia, there is no extensive research being done and until now there is no study that thoroughly evaluates how many patients with diabetes are using CM.

#### Objective of the study

The objective was to assess the use and reasons for use of complementary medicine amongst the diabetic patients attending the Diabetes/Hypertension Clinic at the Out Patient Department (OPD) Ipoh General Hospital. OPD, Hospital Ipoh is a public primary care clinic which was until recently situated in Ipoh Hospital premises. It has shifted into its new premises in Klinik Kesihatan (Health Clinic) Greentown from April 2002.

#### Materials and Methods

This is a cross sectional study to assess the use of complementary medicine amongst diabetic patients attending the Diabetes/Hypertension Clinic, OPD Ipoh Hospital. The study population included all patients with Type 2 Diabetes attending the clinic during the one-week study period from 5th Dec 2001 to 11th Dec 2001. The weekly attendance is about 250 diabetic patients. In this study patients were selected by systematic random sampling (1:5).

Diabetic patients with other diseases e.g. hypertension or asthma were also included in this study. Patients with Type 1 diabetes and with secondary diabetes were excluded.

A questionnaire was prepared (see Appendix I). Patients who had used any form of CM were required to answer questions regarding CM (types, duration, dosage, outcome, the reasons for taking complementary therapy). The questionnaires were pre-tested on 6 diabetics prior to the start of the study.

Patients selected by systematic random sampling were interviewed by the first author. Data were also obtained from the patient's medical records, such as results of blood sugar levels and the presence of complications. The questionnaires were completed at the time of the interview. The completed questionnaires were compiled and all the data were entered into Microsoft Excel and analyzed using EpiInfo 2000.

1 Definition (Occasional=once in a while, Moderate=once daily, Excessive=more than 3 times daily)

#### Results

A total of 43 patients with Type 2 Diabetes were selected for the study. The patient's demographic characteristics are summarized in Table I.

The majority (60%) had normal blood pressure. Fifty-eight percent had developed complications of diabetes such as retinopathy, ischaemic heart disease and peripheral neuropathy. Eighty-eight percent of the patients were on oral hypoglycemic drugs while 12% were on insulin.

Fifty six percent of the diabetic patients in this study had used some form of CM before. The mean duration of CM usage was 7 years. The top 3 treatment categories were herbal (88%), homeopathy (8%) and reflexology (4%). The herbs used included 'Mengkudu leaf, Sentang leaf, Bitter Melon abstract, and Tongkat Ali. 79% were taking moderate dosage, 17% took it occasionally and only 4 % took it excessively (see footnote<sup>1</sup>).

The majority of patients using CM were housewives (50%), retired personnel (25%) and manual workers (21%). This finding probably reflected the composition of participants in this study where the majority of them were housewives (see Table I). Thirty eight percent were introduced to CM by their friends, 33% by their family members and 29% were on their own initiative. None were introduced by health professionals (doctors/nurses).

More than half of the diabetics (56%) were on CM and the reason given was that they felt it could improve their health. Thirty three percent believed that the alternative treatment worked in a more general way and could treat most diseases. Eight percent believed that the treatment was able to alleviate pain from the progression of the diabetes.

Seventy one percent of patients who took CM experienced some sort of relief from the complementary treatments that they received e.g. relieved from body ache and tiredness, 25% said there was no difference and only 4% said that treatments made the symptoms worse.

There was no significant improvement in the blood sugar level of the diabetics on CM plus conventional therapy versus those only on conventional therapy. Both groups showed poorly controlled fasting blood sugar. The results for fasting blood sugar are summarized in Table II.

**Table I: Patients' Demographics Characteristics**

<b>Gender</b>	
Male	55.8%
Female	44.2%
<b>Mean age (years)</b>	
Mean $\pm$ SD	59.65 $\pm$ 10.70 years
<b>Mean DM duration (years)</b>	
Mean $\pm$ SD	11.58 $\pm$ 8.93 years
<b>Ethnic Group</b>	
Malay	51.2%
Indian	25.6%
Chinese	20.9%
Others	2.3%
<b>Level of education</b>	
Primary	32.6%
Secondary	53.5%
Tertiary	7.0%
None	7.0%
<b>Occupation</b>	
Professional	0%
Manual worker	4.7%
Housewife	41.9%
Retired	25.6%
<b>Complications of Diabetes</b>	
Microvascular *	39.5%
Macrovascular **	11.6%
Both	7.0%
None	41.9%

\* Microvascular complications e.g. retinopathy, nephropathy, neuropathy,

\*\*Macrovascular complications e.g. ischaemic heart disease, cerebrovascular disease

**Table II: Fasting Blood Glucose of diabetic patients on CM plus conventional therapy versus conventional therapy alone**

Test	On CM	Not On CM
<b>Acceptable range:</b> FBS: < 7 mmol/L RBS: < 10 mmol/L	3 (6.9%) -	4 (9.3%) -
<b>Uncontrolled:</b> FBS: 7 mmol/L or more RBS: 10 mmol/L or more	17 (39.6%) 13 (30.2%)	13 (30.2%) 2 (4.7%)
<b>Total</b>	24 (55.8%)	19 (44.2%)

FBS: Fasting Blood Sugar\*

RBS: Random Blood Sugar \*

CM: Complementary Medicine

\* Based on the most recent blood sugar reading recorded. HBA1c was not used as this was not routinely done for all patients

## Discussion

This study found more than half (56%) of the diabetic patients used alternative therapies in conjunction with, rather than instead of, more conventional treatment of diabetes and they tended to use these therapies complementary to rather than as a replacement of conventional treatment.

There was no correlation between the educational status of the patients and use of complementary medicine in this study. The usage of complementary medicine was not as a result of dissatisfaction of the conventional therapy but rather to complement the treatment to increase energy and reduce pain.

The reason for using these treatments included maintaining 'wellness' and due to the belief that the treatment was effective for specific health problems such as lethargy and body ache. The most influential or salient factor in the patient's decision to use CM might be its perceived efficacy. Another possible reason why patients seek CM might be because they saw them as less authoritarian and more empowering and offered them more personal autonomy and control over their health care decisions.

Most of the patients in this study chose herbal therapy, as this was most easily available and perceived to have effect on the treatment of diabetes. Tongkat Ali and Mengkudu were the most popular herbs used by the patients. Tongkat Ali or its scientific name *Eurycoma Longifolia* is known to the South East Asia population as a "herb of hundred healing qualities". It has an ancient reputation like Ginseng and has been found to have a positive effect on the hormonal system, increase endurance and enhancing vitality. Based on its reputation, Tongkat Ali was known to have an effect in reducing stress and nervous exhaustion, improving physical and mental performances also assisting recovery and convalescence<sup>8</sup>.

Mengkudu or its scientific name *Morinda Citrifolia* has been used for hundreds of years to address a variety of health disorder such as diabetes, hypertension, arthritis etc. It is considered a strong blood purifier and cleanses the body of harmful bacteria<sup>9</sup>.

Even though the patients who used CM had blood glucose level exceeding the normal limits, they claimed that CM gave them some sort of relief and made them feel more energetic. It is very difficult to determine or measure the effectiveness of the treatment they are taking for relief of symptoms, as it may be psychological (placebo effect).

The use of CM has increased worldwide. The major reasons for concern with the use of complementary therapy include potential for side effects and/or drug interaction. Other concerns included problems with standardizations and misidentification or mislabeling of ingredients.

## Conclusion

This study found that the majority of diabetic patients attending Diabetes/Hypertension Clinic, OPD, Hospital Ipoh were using CM in conjunction with medical therapy. Even though most of the patients claimed that CM gave them some sort of relief, it was not reflected in their blood sugar level, which were poorly controlled. In view of the high usage found, there is a need to assess the effect of these therapies on diabetic outcome.

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## Appendix I

### Questionnaire

Date: \_\_\_\_\_ No: \_\_\_\_\_

1. Name: \_\_\_\_\_

2. Age: \_\_\_\_\_

3. Gender: Male / Female

4. Occupation: \_\_\_\_\_

5. Level of education: Primary / Secondary / Tertiary

6. Race:

Malay / Indian / Chinese / Others \_\_\_\_\_

7. Disease: Diabetes

• Duration: \_\_\_\_\_

• Other Diseases: Hypertension/Asthma/etc \_\_\_\_\_

• Complication:

Microvascular(retinopathy/neuropathy/nephropathy)

Macrovascular (IHD/CVA)

• Medication: oral hypoglycemic drugs / insulin injection.

8. Use of any form of herbs or food that the patient thinks that it has improved the control of diabetes.

• Yes / No if Yes continue Q9

9. Complementary medicine

• Types: \_\_\_\_\_ Duration: \_\_\_\_\_ Dosage: \_\_\_\_\_

Herbs \_\_\_\_\_

Homeopathy \_\_\_\_\_

Acupuncture \_\_\_\_\_

Hypnotherapy \_\_\_\_\_

Reflexology \_\_\_\_\_

Nutritional therapy \_\_\_\_\_

Others \_\_\_\_\_

• Recommended by: \_\_\_\_\_

• Reasons: \_\_\_\_\_

• Outcome: relieve / no difference / gets worse

10. Blood glucose level: FBS / RBS \_\_\_\_\_mmol/l