

Impact of culture on diabetes management in Indo-Asians

Mohan Pawa

ARTICLE POINTS

1 Culture underpins the way of life for many Indo-Asians.

2 The prevalence of diabetes is higher in Indo-Asians than Caucasians.

3 Poor outcomes in the Indo-Asian population are due to genetic, environmental, as well as cultural influences.

4 Understanding of cultural background of Indo-Asians, such as religion and diet, can enhance care.

5 Many Indo-Asians use traditional herbal medications.

KEY WORDS

- Indo-Asian
- Culture
- Diabetes management
- Barriers

Introduction

In the previous issue of this journal, Marwa (2000) discussed the culture of Indo-Asians. This article continues the theme by further characterising cultural beliefs: religion; customs and traditions; and attitudes and knowledge of Western healthcare systems and medicine. The ways in which culture can influence the management of diabetes in this group are also discussed, e.g. religious beliefs often dictate dietary habits. By being more culturally aware, healthcare professionals can improve the diabetes care they provide. This is especially important given the genetic factors that place Indo-Asians with diabetes at a disadvantage (Verma et al, 1984).

Living with diabetes involves all aspects of life at any age and an appreciation of the cultural background of patients is necessary to avoid giving inappropriate advice, creating misunderstandings or causing offence. Culture underpins the way of life for Indo-Asians. This has vital implications on the management of diabetes and prevention of complications, as well as compliance. Knowledge of this culture is therefore important.

Most Indo-Asians and their descendants in Britain belong to one of the following three groups:

- Direct migrants from the Indian subcontinent (India, Pakistan, Bangladesh and Sri Lanka)
- Migrants from East Africa (Kenya, Uganda and Tanzania)
- Migrants from the West Indies (Trinidad) and South America (Guyana).

The first group retains its cultural heritage and links with the Indian subcontinent. The second and third groups tend to be more westernised. They have adapted more readily to the changing culture of health care, although many, particularly the older generations, still maintain their traditional health beliefs as well.

Diabetes prevalence

In 1997, the worldwide incidence of diabetes was 2.1% (BDA, 1997). It is expected that by 2010, the incidence will have increased to 3%, with 61% of people

with diabetes living in Asia (BDA, 1997).

Studies in Southall (West London) and Coventry have shown a 2- to 5-fold higher prevalence of diabetes in Indo-Asians from the Indian subcontinent, and their descendants (Verma et al, 1984).

In 1960, the prevalence in southern India was reported as 5% using WHO's criteria. There was variation between rural and urban populations (1.2% and 7%, respectively) (Ramachandran et al, 1997). A similar study in Pakistan in people aged over 25 years showed a prevalence of 16% in males and 12% in female in a 1997 screening programme. Also, previously undiagnosed diabetes was discovered in one third of the Asians screened (Alberti, 1999).

The prevalence of diabetes increases with advancing age (Burden et al, 1992). Generally speaking, migrants from first and second generations maintain cultural and traditional views more strongly than the third generation.

Higher morbidity in Asians

Diabetes appears to develop at a relatively younger age in Asians. It is therefore more likely that the prevalence and complications will increase with age and socio-economic status (Burden et al, 1992).

The prevalence of complications is similar to that in Caucasians, but mortality from coronary artery disease and the incidence of end-stage renal failure are higher in Asian patients (Burden et al, 1992). The prevalence

of complications is higher in Asians than in Caucasians: cerebrovascular accidents are 10-fold, heart attack 12-fold and peripheral neuropathy and foot complications 10-fold higher (BDA, 1997).

In the UK, the average annual cost for inpatients with diabetes is £1970, compared with £310 for people without diabetes. Kings Fund research (BDA, 1996) showed that diabetes and its related disorders cost approximately 5–7% of the NHS budget (BDA, 1997). The CODE-2 (1999) study showed that the cost of treating 10 million people with type 2 diabetes in Europe was 29 billion Euros. Most of the money was spent on inpatient and secondary services.

Reasons for poor outcomes

Poor glycaemic control and poor knowledge of diabetes among Asians are a cause for concern. Underlying environmental, genetic and cultural influences contribute to this situation. In addition, Asians may have poor access to health care and difficulty in obtaining the health care they require (BDA, 1997).

Factors that may contribute to the development of complications are:

- Lack of knowledge about diet
- Poor dietary compliance
- Obesity/lack of exercise
- Other lifestyle issues, such as increased alcohol intake and smoking
- Hyperinsulinaemia and insulin resistance (genetic predisposition)
- Poor housing
- Stress (perhaps due to racism and/or isolation)
- Unemployment/poverty
- Communication difficulties.

There is no single cause to account for the higher prevalence of diabetes and its complications in Asians.

Barriers to improved outcomes

Language barriers

Several languages are spoken by people from South Asian groups, including Hindi, Urdu, Punjabi, Bengali, Sinhalese, Tamil, Gujarati and Nepali. Poor language communication is a barrier to empowering people to manage their diabetes and improving outcomes of care for them. English is widely spoken as a second language; listeners may

find it difficult to understand the accent. Effort and patience on the part of the professional can facilitate an atmosphere of confidence, and lead to better communication and hence better outcomes for both sides.

Lack of cultural awareness

A better understanding of cultural habits, traditions and customs by healthcare professionals would prevent misunderstandings and enable them to offer advice in the context of cultural background and traditions. Such information would make more sense to the recipients and encourage them to participate in the management of their diabetes.

Many Asian people still feel stigmatised by the diagnosis of diabetes. Some consider diabetes to be a contagious disease. As a consequence, Asian people with diabetes may have difficulty finding a matrimonial match for their children.

Some of the common customs and habits are listed below:

Betel chewing: Adult Asians and Malaysians practise this after-dinner habit.

The product consists of betel leaf (Pan) wrapped around betel nut, limestone paste, catechu, cardamom, rosehips, turmeric root, silver foil and, sometimes, tobacco (Figure 1). Betel leaf, cardamom and rosehips are carminative, a source of vitamin C and provide a pleasant odour. Betel nut, catechu and limestone paste are rich sources of calcium and iron.



Figure 1. Asians and Malaysians often practise betel chewing, which comprises betel nut, and a wide variety of other ingredients with therapeutic properties, wrapped in betel leaf.

PAGE POINTS

1 The prevalence of complications is higher in Asians than Caucasians.

2 In Indo-Asians with diabetes, poor control and poor knowledge of their condition are causes for concern.

3 Barriers to improved outcomes include language barriers and healthcare professionals' lack of cultural awareness.

4 Common social customs include chewing betel and smoking with a hooka.

PAGE POINTS

1 Although alcohol is discouraged or prohibited, it is still consumed by many Indo-Asians.

2 There are several major religions among the Indo-Asian population.

3 Healthcare professionals should be aware of the core beliefs and customs of the major religions.

4 Religious festivals are often characterised by patterns of indulgence in certain types of food or fasting.

Indo-Asian people with diabetes commonly chew betel and it is important to be aware of this when caring for them.

Hooka smoking: This social custom is commonly practised by adult Asian men and women, particularly Muslims and Bangladeshis. The hooka is a smoking apparatus consisting of a small pot of tobacco connected to a water-filled flask with two tubes (*Figure 2*).

Cigarette and beedi smoking: Beedi is rolled tobacco in a tobacco leaf, widely available in Asian grocery shops and Pan/cigarette shops. It has a very high tar content.

Asian people with diabetes should be asked about their smoking and tobacco habits, in view of the high incidence of coronary heart disease and large vessel disease among Asians (Burden et al, 1992).

Alcohol: Alcohol is now commonly consumed and often abused by many South Asians, even though it is prohibited either by culture or by religion. It is often excessively consumed among professional and upper middle class women and men.

It is therefore important to enquire about alcohol consumption in all social groups.

Religious beliefs

The main religions among Indo-Asians are as follows (*Table 1* lists the major festivals of each):

- Hinduism, Jainism (Buddhism)
- Islam

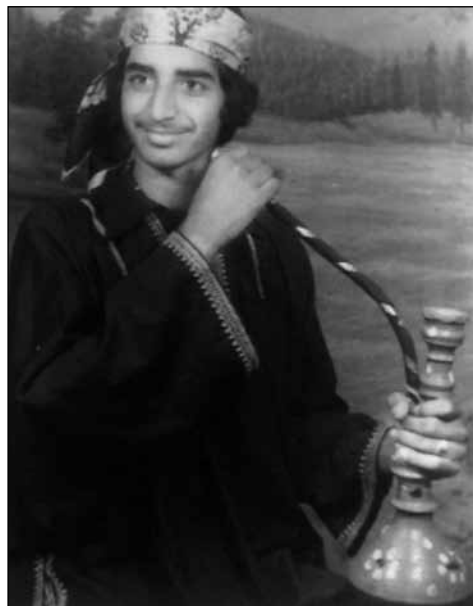


Figure 2. Hooka smoking is commonly practised by Muslims and Bangladeshis.

- Sikhism
- Christianity
- Zoroastrianism (practised by Parsees or Persians)
- Buddhism.

The extended family system is a major strength in supporting religious beliefs of family members. The festivals are often associated with enjoyment and overindulgence in highly saturated carbohydrate sweets, syrups, dairy products and fried food.

Hinduism

Festivals: There are three important festivals celebrated by many Hindus:

- Holi — A 1-day festival of colour welcoming the arrival of spring (February/ March)
- Dassehra — A 2-day festival celebrating the death of Demon Rawana (mostly October)
- Diwali — A 2-day festival of light, joy and sharing. It is a celebration of the return of Lord Rama after killing the Demon Rawana. It follows the start of the the New Year for the trading community.

All the above festivals have one thing in common — exchange of sweets and dry fruit. People visit one another and may be

Table 1. The major festivals of each of each of the major religions of Indo-Asians.

Hinduism:

Holi: 1 day in February/March
 Dassehra: 1 day. Usually October
 Diwali: 2 days. October/November

Islam

Eid-ul-Adha: A 3-day celebration
 Ramadan: Dates vary every year
 Moharram: (celebrated by Shiite Muslims). A 3–7 day festival
 Eid-ul-Fitr: A 2½ day festival following Ramadan
 Idul Milad: Birthday of prophet Mohammed

Sikhism

Baisakhi: New Year celebration on 13 April
 Guru Nank's birthday on 4 November
 Diwali: A 2-day festival October/ November

persuaded or forced to share sweets and rich fried food.

Food: Most Hindus are vegetarian. Sweets are consumed more or less daily. Rich fried food is consumed during celebrations and festivities. To Orthodox Hindus, the cow is sacred and is prayed to. Hindus do not eat beef.

Many women fast for one or two days per week or on certain festive occasions. They may consume fruits, sweets or milk puddings. Full cream milk is commonly used.

Fasting can have important effects on diabetes management. In terms of the therapeutic interventions available, the new generation of prandial glucose regulators, such as repaglinide, may be useful for these people. With its quick onset and short duration of action, repaglinide lowers the risk of hypoglycaemia and allows flexibility in dosing — when a meal is missed, then so is the dose. Nateglinide, another prandial glucose regulator, is at present seeking approval.

Islam

Muslims form a large percentage of people in South Asia today. Islam is the majority faith of people in Pakistan and Bangladesh. Islam has two sects — Sunni and Shiah (practised by Sunnites and Shiites, respectively). These were formed on political and religious grounds in the first few centuries after Islam was established. Both sects venerate the Kor'an but have their own interpretation (Hadith). They also have different views towards Mohammed the prophet and his successor. Islam has no priesthood; the nearest equivalent to priests are Imams — leaders whose position derives from social custom and their authority to interpret the scripture rather than from defined status.

Islam lays down social rules and religious behaviours. Islam also prohibits any distinction on the basis of race or colour.

Festivals: The Muslim year is divided into twelve lunar months, which alternate between 29 and 30 days duration. This means that the dates of the Muslim festivals can vary considerably between different years.

- Moharram — The anniversary of the killing of the prophet's grandson Hussein.

It is commemorated by Shiite Muslims.

- Ramadan — This is the holy month. A strict fast is practised for 29/30 days, during which eating is only permitted between sunset and sunrise. Dates vary every year.
- Eid-ul-Fitr — A festival to mark the end of Ramadan.
- Eid-ul-Adha — A three-day festival concentrating on the sacrifices of Islam celebrated after the completion of the pilgrimage to Mecca.
- Idul Milad — Birthday of Prophet Mohammed.

Sikhism

The word Sikh is derived from the Sanskrit word for 'disciple'. The beard and turban identify the Sikh male. Sikhs form approximately 2% of the population of India. Sikhism emerged in the 15th century as a reformed Hindu sect, offering the humanistic philosophy of Guru Nank to Hindus and Muslims, as a means of furthering their self-identity.

Beliefs: Sikhs believe in God, rejecting the worship of objects or images.

Guru Nank opposed discrimination



Islam is the majority faith of Pakistanis and Bangladeshis.

Indo-Asian people with diabetes: A checklist of useful points for healthcare professionals to bear in mind.

- Indo-Asians comprise different people from different countries.
- They have different culture and customs — recognise their social and family needs.
- English is not their first language — be patient, give them time and listen.
- They have different religions — understanding and respect will be appreciated.
- They have different dietary habit and beliefs — pork and beef may be forbidden.
- The hierarchy in households may also be significant.
- They use many traditional/herbal medicines.
- They can receive dietary advice from Diabetes UK (formerly the British Diabetic Association).
- Remind them to consult their doctor/nurse at the earliest signs of complications.
- Remind them that doctors and nurses sensitive to their needs are available to help them.

PAGE POINTS

1 Traditional herbal remedies are used by many Indo-Asians.

2 Some herbal medicines, available in the UK as tablets or capsules, have potent hypoglycaemic properties.

3 The healthcare professional can enhance their diabetes care by being culturally aware.

on the grounds of caste, and believed God is one, formless, eternal and beyond description. He believed that God is omnipresent and visible to everyone.

The core beliefs of Sikhs are:

- Nam: Worship, meditating, repeating God's name
 - Dan: Giving charity
 - Isnan: Bathing.
- Every Sikh should have these five Ks:
- Kesh (uncut hair)
 - Kangha (comb)
 - Kirpan (dagger or small sword)
 - Kara (steel bangle)
 - Kachi (boxer shorts).

Most families will have a Gurugranth, a religious Scripture, and a shrine at home.

Food: Gurdwara is the temple and a gateway to the guru. It serves three free vegetarian meals with chapatias (Langer) every day of the year. Chapatias are high in fibre and starch. Desserts, also offered, are invariably made of full cream milk, dry nuts and sugar.

Kadha (Prasad) is an offering to Guru and is served to people visiting the temple. It is made with Ghee (melted butter), dry nuts and full cream milk. It is worth enquiring how much is consumed by people with diabetes.

Festivals:

- Baisakhi is the Sikhs' New Year and is celebrated on 13 April with prayers and exchange of presents.
- Guru Nank's birthday is celebrated on 4 November.
- Diwali — Celebrated by prayer, exchange of presents and distribution of sweets to friends and relatives. This is celebrated over two days in October or November.

Traditional remedies

Many Indo-Asian people with diabetes use various types of traditional/herbal medicines in conjunction with the therapeutic medications. These herbal medicines are mostly vegetables, fruits and leaves or the bark of trees.

A literature review of 150 herbs and their isolates was carried out by the Central Council for Research in Ayurveda and Sidh (Pawa, 1998). However, only a limited number of herbs and plants displayed significant hypoglycaemic properties. These included karela, or gourd

memordicca carrantia, which contains a Pro V-insulin like substance. There are also others, in tablet and capsule form, which are easily available in this country. Most of them have potent hypoglycaemic properties. Most of the tablets have four to five ingredients, some of which are hepatotoxic.

It is important to ask the Indo-Asian people with diabetes if they are taking the above medications.

Conclusion

Culture is a way of life, or a form of living, which bestows people with inner feelings and reflection on their behaviour and beliefs.

To people from the Indo-Asian subcontinent, it is intensely rewarding to come across a healthcare professional who, by their cultural awareness, can be more sympathetic, can understand the background to what is being said and hence, provide better diabetes care. ■

Alberti G (1999) Reflections on Indo-Asian diabetes *Practical Diabetes International* 16(1): 3–4

British Diabetic Association (BDA) (1996) *Kings Fund Report: Counting the Cost. The Real Impact of Non Insulin Dependent Diabetes*. BDA, London

British Diabetic Association (1997) *Recommendations for the Management of Diabetes in Primary Care*. BDA London.

Burden AC, McNally PG, Feehally J, Walls J (1992) Increased incidence of end-stage renal failure secondary to diabetes mellitus in Asian ethnic groups in the United Kingdom. *Diabetic Medicine* 9(7):641–5

CODE-2 study (1999). *Revealing the cost of type 2 diabetes in Europe*. Symposium at EASD conference (27 September 1999) SmithKline Beecham

Marwa K (2000) Influence of culture on Asians with diabetes living in the UK. *Diabetes and Primary Care* 1(4): 104–6

Pawa M (1998) *Herbal and traditional remedies in Indo-Asians with diabetes*. Poster presentation at Primary Care Diabetes UK BDA conference Bournemouth, 5–6 November 1998

Ramachandran A, Snehalatha C, Lathé E et al (1997) The rising prevalence of diabetes in urban population in India. *Diabetologia* 40: 232–7

Verma NP, Mehta SP, Madhu S, Mather HM, Keen H (1986) Prevalence of diabetes in an urban Indian environment: the Darya Ganj diabetes survey. *British Medical Journal* 16: 423–4

Further reading

MacKinnon M (1998) *Providing Diabetes Care in General Practice. A Practical Guide for the Primary Care Team*. Class Publishing, London

Govindji A (1996) Dietary advice for the Asian diabetic. *Practical Diabetes* 8: 202–23