

Editorial Review

Organ donation, transplantation and religion

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Abstract

Religious concerns may be an important reason why patients decline listing for a renal transplant. These issues may be equally, or even more, important when live donation is discussed. There is good reason to believe that religious concerns play a significant role much more often than clinicians and transplant teams believe. The issue is certainly further compounded by the fact that a few, if any, patients come forward with their religious concerns, not least because issue of transplantation is new to them anyway and because they meet with transplant teams whom they do not know. Health professionals, on the other hand, may wish to avoid this sensitive issue altogether or may lack knowledge on religious issues pertaining to transplantation. Some may be entirely unaware. We encountered a case in clinic that revealed our remarkable lack of knowledge in this regard. Here, we aim to provide an overview on how the different religions view transplantation and organ donation, with an emphasis on practical points for health care professionals who are involved in transplant listing, organ donation and retrieval, and transplantation itself. Knowledge of these facts may provide a background to deal with these issues professionally and appropriately and to increase transplant numbers.

Keywords: organ donation; religion; transplantation

Introduction

There is good evidence that patients from indigenous and migrant ethnic minorities are more likely to develop end-stage renal failure but less likely to receive a renal transplant [1]. They are also typically less likely to receive a well-matched kidney since they are under-represented among deceased donors: in the UK, only 5.1% of deceased kidney donations during the financial year 2008/2009 were from non-white donors, although a quarter of patients on the waiting list were non-white [2]. Unfortunately, low rates of live donation among ethnic minorities have been described as well [3]. Recent studies suggest that, apart from cultural, social and educational issues and language

barriers, religious concerns may also play a role in a decision against donation [4]. However, care must be taken not to equate ethnicity with religion, and detailed analysis is required to dissect the various factors. There are also striking differences between countries as to the willingness to donate (Table 1). Some of these differences may be explained by different infrastructure, law or consent system, but religious factors may play a role as well, particularly in countries with low deceased donation rates [5]. We recently encountered a case in our clinic that made us rethink our approach to this issue, particularly in the large numbers of Muslim patients we see in our catchment area in the North West of England. In this review article, we first explore the Islamic view of organ donation and transplantation. We then provide an overview on how the other major religions view this topic, starting with the two other Abrahamic faiths (Christianity and Judaism), then moving on to the two major religions in India (Hinduism and Sikhism) and then to the religions of East Asia (Buddhism, Confucianism, Shintoism and Taoism). Finally, we discuss the issue of directed donation and religion.

Case vignette

A 46-year-old Muslim female patient with IgA nephropathy was seen for an annual review on the renal transplant waiting list. She had started peritoneal dialysis in 2007, and we had listed her for a renal transplant in 2008. When seen now in spring 2010, she was very well indeed, and there were no new issues regarding transplant listing. At the end of the consultation, we asked for potential donors, as per our unit policy. She mentioned that she was born in Pakistan. It then transpired that several young and healthy relatives from her large family were available. All of them, however, were of the Muslim faith and believed that organ donation was not in keeping with Islam. They had therefore decided not to see the live donor team in the first place. The patient herself was not sure what to do and asked us for help, saying ‘Does Islam forbid organ donation?’ The doctor in our clinic (AW) had to admit total ignorance but promised to investigate.

Table 1. Percentage of the population on the organ donor registry

Country	Predominant religions	Percentage of the population with organ donor card	Deceased donation rates (per million population)
European Union	75% Christian (contemporary estimate) [67]	12% (2007 data) [68]	16.85 (2007 data) [69]
Iran	99.5% Muslim (1996 census) [70]	0.5% (2010 data) ^a	2.9 (2009 data) [71]
Japan	51% Shintoist/42% Buddhism (2006 data) [72]	0.4% (1995 data) [73]	0.8 (2009 data) [71]
Israel	75% Jewish (2008 data) [39]	8% (2010 data) [34]	9 (2004 data) [74]
Saudi Arabia	97% Muslim (2003 data) [75]	NA	3.3 (2009 data) [71]
Singapore	42.5% Buddhist (2000 data) [76]	^b	4.6 (2009 data) [71]
USA	76% Christian (2008 data) [77]	37% (2009 data) [78]	26.6 (2007 data) [69]

Numbers may not be directly comparable; for instance, central registration is usually done for organ donor card holders in the UK, but it is not in Germany, and organ donor cards are part of the driving licence in many states of the USA. The deceased donation rate as a measure of transplant performance has been criticized elsewhere [79]. NA, not available.

^aK. Najafizadeh (personal communication).

^bSingapore has a presumed consent system [10].

Islam and organ donation

Violating the human body, whether living or dead, is forbidden in Islam. However, altruism is also an important principle of Islam, and saving a life is placed very highly in the Qur'an—'Whosoever saves the life of one person it would be as if he saved the life of all mankind' (chapter 5:32). In this dilemma, the principle that reconciles the two is 'necessity overrides prohibition' (*al-darurat tubih al-mahzurat*). This principle has been used previously to approve the use of pork insulin and porcine bone grafts [6]. In a formal decision in 1996, the UK Muslim Law Council issued an *Ijtihad* (religious ruling) that organ transplantation is entirely in keeping with Islam [7]. Accordingly, Muslims in the UK may carry donor cards, and live donation is seen as an act of merit. Previously, the Islamic Jurisprudence Assembly Council in Saudi Arabia approved deceased and live donation in a landmark decision in 1988 [7]. Similar formal rulings are in place in, among others, Egypt, Iran [8] and Pakistan.

However, although internationally most Islamic scholars endorse organ donation, many individuals within the faith are still reluctant, particularly regarding deceased donation. Thus, most transplants in many predominantly Muslim countries are still live donations. In Iran, deceased donation amounted to only just 13% of renal transplants performed in 2006 [8]. In Turkey, Saudi Arabia and Kuwait, the numbers are ~25% [8]. It is, however, premature to conclude that all of the differences in deceased and live donation activities are necessarily due to religious factors alone, as logistical problems may play a major role as well.

One explanation for these observations is the fact that Islam, as all religions, is not monolithic. Of note, there appears to be some discrepancy between Indo-Asian and Arab Muslim scholars in that the former are often less approving of organ donation [9]. Singapore may serve as an extreme example in that a countrywide presumed consent system is in operation, but Muslims are automatically exempt [10]. Various reasons are given for the ongoing scepticism, including the thought that the human body is entrusted to man and not for man to interfere with at leisure. The concept and definition of brain stem death are also controversial as described elsewhere [11]. Muslim burial customs deserve consideration as well: it is trad-

itional for Muslims to be buried within 24 h, and a lengthy organ retrieval procedure may raise concerns [12]. It is also noteworthy that religious concerns play a role even among Muslim physicians. A survey in 2005 in Turkey showed that as many as 21% of doctors cited religious concerns as a reason not to be more proactive about organ donation [13]. Efforts to promote organ donation may therefore have to include Muslim physicians as well.

Due to these ongoing uncertainties, Muslims may seek the advice of their local imam, and ultimately, the decision/advice of this scholar is respected. A recent review of 70 contemporary fatwas confirmed some degree of heterogeneity, although all supported transplantation [14]. It is therefore vital that education in organ donation be targeted at those individuals who are most influential within a community. A recent study from Iran suggested that Ramadan with its emphasis on altruism may be a good opportunity to foster organ donation among Muslims and described an increase of organ donation cards in that period [15].

Christianity

The Christian faith appears to generally endorse transplantation, although there are clearly different nuances in opinion. Most Anglican, Catholic and Protestant scholars seem to agree that organ donation is an act of selflessness and endorse transplantation. One act of support has gained particular publicity, namely the fact that the current pope Benedict XVI has publicly announced that he carries a donor card at all times [16]. The previous pope, John Paul II, also publicly supported organ donation, not least in the encyclical letter *Evangelium Vitae*, in which he praised organ donation as a praiseworthy example of Christian love [17]. The Church of England takes its support for organ donation even further and declared organ donation a Christian duty in 2007 [18]. However, the church also emphasized that there were different views as to whether an opt-in or opt-out system of consent was appropriate [18]. Another example of the positive views of organ donation by Christianity is the 1990 joint declaration of the Catholic and Protestant Church in Germany, which also encouraged organ donation [19]. As far as we are aware, all major protestant denominations support organ donation or do not object, including the Pentecostal Church and

Presbyterians. The same seems to apply to the Eastern Christianity. In 2005, the head of the Greek Orthodox Church, Archbishop of Athens and All Greece Christodoulos announced that he and the members of the Holy Synod had all signed organ donor forms [20]. Neither the Anabaptists, such as the Amish, nor the Brethren and Mennonite Churches seem to have any particular views on this issue, nor any specific objections.

The Church of Jesus Christ of Latter-day Saints (commonly referred to as the Mormon Church) [21] and the Quakers do not object formally but believe that organ donation and transplantation should be left to the individual's decision.

Christian Science is a non-Trinitarian religious group founded by Mary Baker Eddy in 1866. Students of Christian Science are usually, though not always or necessarily, members of the First Church of Christ, Scientist (also called the Mother Church) in Boston, MA, USA. Among the religions discussed here, it is noteworthy for its general attitude towards modern medicine. According to Christian Science, the principal way of healing is through prayer, and members are usually against most, if not all, treatments offered by modern medicine. This includes vaccination, and outbreaks of measles have been reported [22], as has been increased mortality in general [23]. However, current guidance on the use of modern medicine is more liberal and stipulates that

There is no biblical or church mandate to forgo medical intervention, nor do Christian Scientists believe that it's God's will that anyone suffer or die [24].

The issue of organ donation has been discussed explicitly by the Christian Science Board of Directors, and organ donation and transplantation are seen as a personal choice [25].

The Jesus Christians are a small Christian group that practises communal living. Importantly, members believe that giving up an organ to save someone's life is an exemplary act of devotion to God and humankind. Fifteen out of 28 members of this small group have already donated a kidney [26]. Mayo Clinic have described their experience with this scenario in great detail elsewhere [27]. Authorities in Victoria, Australia have on occasion banned altruistic donation from Jesus Christians [26].

Jehovah's Witnesses

Jehovah's Witnesses are a non-Trinitarian Christian denomination, distinct from mainstream Christianity, and deserve special consideration. The issue of transplantation in Jehovah's Witnesses is not straightforward and compounded by the refusal of blood transfusion. This affects transfusion of full blood, platelets and plasma [28]. Dialysis, plasma exchange, substitution of clotting factors or albumin, and erythropoietin treatment are all allowed [28]. Some have argued that consent to rescue transfusion should be a prerequisite for transplant listing [29]. Transplantation itself was not allowed for Jehovah's Witnesses

until very recently. In fact, religious guidance from the 1960s stated

When men of science conclude that this normal process will no longer work and they suggest removing the organ and replacing it directly with an organ from another human, this is simply a shortcut. Those who submit to such operations are thus living off the flesh of another human. That is cannibalistic. However, in allowing man to eat animal flesh Jehovah God did not grant permission for humans to try to perpetuate their lives by cannibalistically taking into their bodies human flesh, whether chewed or in the form of whole organs or body parts taken from others. [30]

This view of transplantation was only revised in the 1980s, and contemporary guidance views the decision for or against transplantation as an individual choice [31], under the assumption that no blood is transplanted. Since then, small case series of kidney and kidney-pancreas transplantation in Jehovah's Witnesses have been reported [32]. Early post-operative deaths in anaemic patients, however, have been described as well [33].

Judaism

The Jewish faith has traditionally taken a sceptical view regarding transplantation and deceased donation in particular. It is worthwhile to look into the reasons for this attitude. The Jewish faith places great importance on avoiding any unnecessary interference with the body after death, and the requirement for burial of the complete body (as in Islam, burial within 24 h is the norm). There are three prohibitions concerning cadavers that would seem to preclude deceased organ donation. These are (i) desecrating a cadaver, (ii) delaying burial of a cadaver, and (iii) receiving benefit from a cadaver [34].

These considerations have led some Jewish scholars to disagree with deceased donation. Indeed, the Orthodox Haredi group issued anti-organ donation passes [35]. Only 8% of Israel's population are registered organ.

However, many Jewish scholars feel that these concerns are overridden by the urge to save lives (*pikuach nefesh*). Saving a life is a fundamental value in Judaism. In fact, Jewish law demands that one should violate almost all other commandments to save a life (except for the prohibitions of murder, idolatry and illicit sexual relations). This guidance has been used to solicit live donation, but some have also used it in the context of deceased donation, arguing that *pikuach nefesh* overrides the three prohibitions mentioned above [34]. Of course, it is conceivable that somebody could question as to whether a kidney transplant is truly life-saving, given that survival on dialysis is a viable alternative. Jewish scholars have already discussed a similar issue, corneal transplantation. Although not strictly life-saving, it was felt that blindness was similar to death, and corneal transplantation was Halachically acceptable [34].

HOD
HALACHIC ORGAN DONOR
SOCIETY

YITZCHAK WOOLF

I, **Yitz Woolf**, agree to donate all my organs for transplant - not research - only after (the option checked below):

Irreversible cessation of autonomous breathing (as confirmed by brain-stem death)

Irreversible cessation of heartbeat

Any and all preparations for transplant may begin only after consultation with a family appointed Rabbi. All medical procedures must be done with the utmost care, respect, and minimum damage to the cadaver.

Family Contact: _____ Phone: _____

Family Contact: _____ Phone: _____

Fig. 1. Organ donor card provided by the Halachic Organ Donation Society. Note the two options for consent, namely after brain death and/or after cessation of heartbeat. Image kindly provided by Mr Robby Bernman, Director, Halachic Organ Donation Society, New York, NY, USA.

An interesting debate still surrounds the issue of brain stem death. The critical ‘Halachic’ question is whether or not Jewish law considers a person dead when the whole brain (including the brain stem) dies or when the heart stops beating. There are scholars on both sides of the divide, whereby the ultra-Orthodox may regard brain death as not sufficient. Accordingly, the donor card issued by the Halachic Organ Donor Society uniquely offers two options, i.e. donation after brain stem death and/or after cardiac death (Figure 1).

Another interesting issue is that of a *Goses*, a Halachic term describing a person who is deathly ill and likely to die within 3 days; according to Jewish faith, a *Goses* must not be interfered with so as not to accelerate death. For this reason, there may be reluctance to intervene medically with an imminently dying patient solely for the purpose of preparing them for organ donation. Consultation with a competent rabbinic authority may be advisable.

Hinduism

Hinduism is the predominant religion in South Asia with ~1 billion followers. It has no founder and no universal authority. Hindus believe in transmigration of the soul and reincarnation, whereby the deeds of an individual in this life will eventually determine its fate in the next. Another important tenet of Hinduism is to help those who are suffering,

and *Daan*, or selfless giving, ranks third among its *Niyamas* (virtuous acts) [36,37]. However, the physical integrity of the dead body is not seen as crucial to reincarnation of the soul:

As a person puts on new garments, giving up the old ones. The soul similarly accepts new material bodies giving up the old and useless ones [38].

Interestingly, reports about the use of body parts to benefit others are also deeply embedded in Hindi mythology. In fact, the earliest depiction of xenotransplantation is the case of Ganesha, one of the best known and most widely worshipped deities in the Hindu pantheon, who is pictured with an elephant head. Various Hindu scholars have endorsed organ donation publicly. Hasmukh Velji Shah of the World Council of Hindus stated that

The important issue for a Hindu is that which sustains life should be accepted and promoted as Dharma (righteous living). Organ donation is an integral part of our living. [37]

Sikhism

Sikhism is a monotheistic religion founded in 15th Century India by Guru Nanak Dev Ji (1469–1538) [39]. The word ‘Sikh’ means learner, and there are no ordained priests in Sikhism; the Sikh temple (*gurdwara*) is in the care of a reader (*granthi*), who is appointed by the community. Sikhs think religion should be practised by living in the world and coping with life’s everyday problems. Sikhism also stresses the importance of doing good actions [39]. Sikhs believe in life after death, and a continuous cycle of rebirth. All Sikhs, apart from stillborn babies and infants dying within a few days of birth, are cremated [40]. In Sikhism, the physical body is not crucial to the cycle of rebirth, as the soul of a person is eternal while the body is simply flesh. Accordingly, a survey within a Sikh community in the UK demonstrated a generally positive attitude towards organ donation [41].

Buddhism

Buddhism is a common religion in Asia, particularly in Thailand, Cambodia, Singapore and Vietnam. Very different Buddhist traditions exist concurrently. Crucial to Buddhism is the idea that all of life is suffering (*dukkha*), which can be overcome by an 8-fold path of virtues [42]. Buddhism also sees everything on earth as transitory and believes in rebirth.

In Buddhism, the death process of an individual is viewed as a very important time that should be treated with care and respect, while preserving the physical integrity of a dead body is not seen as crucial. However, the concept of brain death is problematic for some Buddhist traditions. According to Tibetan Buddhism, the spiritual ‘consciousness’ may remain in the body for days after the breath has stopped [43]. Only its departure is seen as the actual mo-

ment of death, and the body must remain undisturbed until then. Any disturbance of this process may adversely affect the person's next rebirth [43].

These considerations are in conflict with generosity (*dāna*) or selfless giving as another central principle of Buddhism [44,45]. In this dilemma, Buddhist scholars come to different conclusions. Some are more or less opposed to deceased donation entirely [45], while others leave it to individual decision [43]. Again, local scholars representing the individual patient's school of Buddhism may be helpful in providing guidance.

Confucianism

Confucianism is a Chinese philosophical and quasi-religious system developed from the teachings of the Chinese philosopher Confucius (Kǒng Fūzǐ, 551–478 BC). Countries strongly influenced by Confucianism include mainland China, Taiwan and Korea. Filial piety is seen as the basis of *Jen* (humaneness), a key principle of Confucianism [42]. Children must obey parents reverently when young, serve them diligently when they grow old, bury them respectfully and worship them afterwards [42]. The Confucian teaching maintains that one is born with a complete body and should end the same way, as a form of filial piety:

Body, hair and skin are gifts from parents, let no one damage them. [42]

This line of thought would imply that organ donation is essentially unfilial and disrespectful of parents [42]. A contemporary study among medical students in Hong Kong confirmed that these concerns are still very prevalent [46]. Another study from Korea provided further evidence of Confucian beliefs as an obstacle to organ donation [47]. Although traditional Confucian principles seem to exclude organ donation entirely, modern Confucian scholars have taken different views. They cite Confucius who said

The man of *Jen* is one who, desiring to sustain himself, sustains others. [42]

They believe that *Jen* and righteousness are valued more in Confucianism than preserving the integrity of the dead body [42] and therefore approve of organ donation.

Shintoism

Shinto is the indigenous spirituality of Japan. There is some debate as to whether Shinto can be classed as a religion. Shinto is very much concerned with the idea of purity and believes that people are born pure while that living creates impurities. The body after death is thus impure, dangerous and powerful [48] [49]. Interfering with a corpse brings bad luck. There is also the concern that interfering with the corpse might injure the relationship between the dead person and the bereaved (known as the

itai). It is therefore obvious that the Western medical concept of brain death must be at odds with the Shintoist view of death.

Not surprisingly, an early heart transplant in Sapporo in 1968 drew harsh criticism and triggered a long period of public scepticism. Until recently, legislation reflected this and forbid deceased donation so that patients in need often went abroad [50]. The law changed in 1997 to allow formally transplantation from deceased donors. However, even today, transplantation from deceased donors is not often carried out in Japan, and 90% of all renal transplants performed are from live donors [51]. The percentage of Japanese who carry an organ donor card is among the lowest in the world, as is the deceased donation rate (Table 1). During the first 6 months of 2010, only 95 transplants from 46 deceased donors were carried out in the country [52]. The rarity of deceased donation may also explain why Japan saw, out of necessity, the development of one of the first ABO-incompatible transplant schemes [53].

Taoism

Taoism denotes a variety of philosophical and religious traditions that have influenced Eastern Asia for more than two millennia. Tao roughly translates as 'path' (of life) but also carries other, more abstract, meanings. Taoist theology emphasizes naturalness, vitality, peace and 'non-action' (*wu-wei*). The latter denotes not taking action against the flow of nature [46]. Of course, organ donation can be seen as an attempt to change the natural process. Modern Taoist scholars, however, have emphasized that the body itself is only a shelter to the more important parts of life. They therefore believe that attempts to change the body cannot truly affect the essence of life and would approve of organ donation [46]. They also cite Lao-tze when he states that

Let what is superfluous to fill what is insufficient [46]

and regard this as evidence that Taoism is not at odds with the idea of organ donation [46].

Directed donation and religion

Directed donation can be defined as a transplant procedure in which donors or their family members direct the organs to a group of recipients who are determined by the presence or absence of a particular characteristic, such as age, gender, ethnicity or religion [54]. Most transplant programmes do not allow directed deceased donation except for the very rare case where a potential recipient has a pre-existing relationship with the deceased donor as defined by the American Society of Transplant Surgeons (ASTS) in 2006 [55]. Similarly, current UK guidelines [56] emphasize unconditional altruism as the fundamental principle of all deceased organ donation and only allow for directed deceased donation in exceptional circumstances akin to those

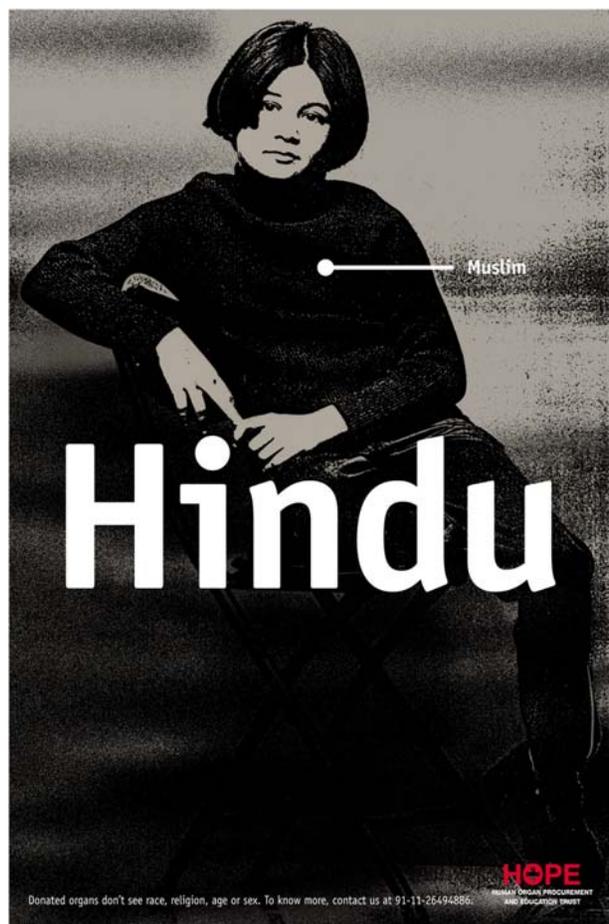


Fig. 2. Advertisement from the 2003 campaign by the Indian Human Organ Procurement and Education Trust (HOPE). Note the text in the bottom left corner, saying 'Donated organs don't see race, religion, age or sex.' Copyright by Ogilvy and Mather. Image kindly provided by Ogilvy and Mather Ltd., New Delhi, India.

defined in the 2006 ASTS statement. Others have disagreed with this view [57]. Not much is known regarding attempts at directed deceased donation on the basis of religion. A request for directed donation was reported in a man of the Jewish faith from New York who volunteered to donate a kidney on the condition that the recipient was also of the Jewish faith [58]. The Halachic Organ Donor Society (HODS) originally promoted donation among people of the Jewish faith (D. Truog, personal communication) but now endorses donation to non-Jews [34]. It is conceivable that attempts at directed donation within religious groups as well as attitudes and beliefs in this regard are under-reported. Lam and McCollough [59] demonstrated that Chinese Americans were not generally against organ donation but greatly preferred donation to someone from their own home country and religion. It is reassuring that good rates of deceased donation across religious barriers have been reported from Israel [60]. Of note, directed donation could be very detrimental to ethnic minorities if they are excluded as recipients. It is also noteworthy that some countries have taken a proactive approach to foster the idea that donation should be altruistic and not end at religious

boundaries. One good example is the 2003 organ donation campaign by the Indian Human Organ Procurement and Education (HOPE) Trust. In their evocative and prized ads, HOPE included one picture symbolizing a Hindu recipient of a Muslim heart transplant (Figure 2).

Conclusion

The clinical encounter with our patient revealed some relevant and embarrassing gaps in our knowledge, and we took the opportunity to explore and learn how different religions view organ donation and transplantation. This revealed some striking differences between the major faiths, but also a common theme, namely the dilemma between religious concerns and altruism. Our patient's family appreciated the existence of unanimously positive Muslim rulings in this matter, and we were able to restart the evaluation of potential live donors. Sadly, further evaluation showed them to be not suitable. Religious concerns may be an under-reported obstacle to deceased and live donation and/or the willingness to accept a transplant. Many western countries are becoming increasingly multicultural, and immigrants are likely to retain religious concerns abroad [59]. Transplant teams, donation coordinators, intensivists and nephrologists need to be more aware, and strategies to increase donation should take into account religious concerns, although a proactive approach [61] must be balanced against the patient's right to keep this issue confidential. We now stock a leaflet [62] on Islam and transplantation in our clinic (similar leaflets on other faiths are available for download from the NHS Blood and Transplant website). In many cases, providing information alone will not be sufficient to overcome the concerns of prospective donors. It is also conceivable that prospective donors use religious concerns to conceal their reluctance to donate. Having a multicultural transplant team may help [51], but it is worthwhile to remember that religious opinions among care providers themselves may also influence medical decision-making [63]. In the UK, the Organ Donation Taskforce has commissioned a survey among faith leaders [64], which also revealed a positive attitude [65]. The concurrent Wall of Life initiative to increase organ donation in the UK [66] is endorsed and supported by Anglican and Catholic bishops, the Muslim Council, the Sikh Network, a chief rabbi, and others. Such initiatives should be encouraged and their effects evaluated in greater detail.

Conflict of interest statement. Two of the authors are of the Muslim faith, and two are Christians.

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Received for publication: 23.5.10; Accepted in revised form: 18.9.10