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# Gestational surrogacy

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**Gestational surrogacy is a treatment option available to women with certain clearly defined medical problems, usually an absent uterus, to help them have their own genetic children. IVF allows the creation of embryos from the gametes of the commissioning couple and subsequent transfer of these embryos to the uterus of a surrogate host. The indications for treatment include absent uterus, recurrent miscarriage, repeated failure of IVF and certain medical conditions. Treatment by gestational surrogacy is straightforward and follows routine IVF procedures for the commissioning mother, with the transfer of fresh or frozen–thawed embryos to the surrogate host. The results of treatment are good, as would be expected from the transfer of embryos derived from young women and transferred to fit, fertile women who are also young. Clinical pregnancy rates achieved in large series are up to 40% per transfer and series have reported 60% of hosts achieving live births. The majority of ethical or legal problems that have arisen out of surrogacy have been from natural or partial surrogacy arrangements. The experience of gestational surrogacy has been largely complication-free and early results of the follow-up of children, commissioning couples and surrogates are reassuring. In conclusion, gestational surrogacy arrangements are carried out in a few European countries and in the USA. The results of treatment are satisfactory and the incidence of major ethical or legal complications has been limited. IVF surrogacy is therefore a successful treatment for a small group of women who would otherwise not be able to have their own genetic children.**

*Key words:* gestational surrogacy/IVF surrogacy/surrogacy

## Introduction

The earliest mention of the term 'surrogacy' is in the Old Testament of the Holy Bible (*Genesis* 16.1–15). The story is told that, because Sarai had been unable to bear Abraham a child, she suggested to him that he 'go unto my maid Hagar; it may be that I may obtain by her'. Abraham did as he was told and, at the age of 90 years, he was able to father a child by Hagar, and Ishmael was born. It is likely that surrogacy has been used through the ages to help women who are unable to have children themselves to have families, but no specific incidences are recorded in the medical history texts.

Until the introduction of modern assisted reproductive techniques, 'traditional or partial surrogacy' was the only means of helping women who had no uterus or major abnormalities of the uterus to have children. In more recent years, artificial insemination, either intracervical or intrauterine, has been used to inseminate surrogate hosts with the semen of the male partner of the couple wishing to have the child; this being more socially acceptable than by the 'natural way'.

Assisted reproductive technology has enabled both partners in a relationship to use their own gametes to create their own unique embryos and for these embryos to be transferred to a surrogate host. This has meant that, although the female partner of the couple wanting the child may have no uterus, she is able to have her own genetic child or children. Since most couples want their own genetic children, 'IVF surrogacy' has become an accepted treatment option for women in certain countries with these unique circumstances. The penalty paid, however, is that the sophistication of the treatment is very much greater than it is for 'partial surrogacy' and therefore the degree of commitment and the costs are very much higher.

## Definition of terms

The term 'surrogate mother' or 'surrogate' is usually applied to the woman who carries and delivers a child on behalf of another couple. The picture becomes confused, however, when others argue that the woman who rears the child, rather than the one who gives birth, is the surrogate mother and the woman who gives birth is in fact the mother and not the surrogate. Since, in most countries, the woman who gives birth, even to a genetically unrelated child, is the legal mother of the child, the position is made still more confusing.

When the intended host is inseminated with the semen of the husband of the 'commissioning couple', the procedure is known as 'straight surrogacy', or 'partial surrogacy'. The resulting child is genetically related to the host. When the sperm and oocytes of the 'genetic couple', or 'commissioning couple' are used and IVF is carried out on them and the resulting embryos are transferred to the host, this is known as 'gestational surrogacy', 'full surrogacy',

 

**Table I.** Indications for the treatment of 37 couples requiring treatment by IVF surrogacy at Bourn Hall Clinic

| Indications | No. of cases | % |
|---|---|---|
| Following cancer surgery | 10 | 27 |
| Congenital absence of the uterus | 6 | 16 |
| Post-partum hysterectomy | 6 | 16 |
| Repeated failure of IVF | 6 | 16 |
| Recurrent abortion | 5 | 13 |
| Hysterectomy for menorrhagia | 2 | 5 |
| Severe medical conditions | 2 | 5 |

From Brinsden (1999b), with permission.

'host surrogacy' or 'IVF surrogacy'. The 'surrogate host' is genetically unrelated to any child born as a result of this arrangement.

In this review, the terms 'gestational surrogacy' will be used, the host will be known as the 'surrogate host' and the couple providing the gametes and embryos will be known as the 'commissioning couple'.

## Indications for gestational surrogacy

The principle indications and the proportion of patients in each group requiring surrogacy in our own practice at Bourn Hall Clinic are shown in Table I. The main indications for treatment by gestational surrogacy are clear: women with congenital absence of the uterus and women who have had a hysterectomy for carcinoma or haemorrhage, but who all still have functioning ovaries, are obvious candidates for treatment by gestational surrogacy. A less obvious indication is for women who have suffered repeated miscarriages and for whom the chance of ever carrying a baby to term is remote. Similarly, women who repeatedly fail to implant normal healthy embryos in treatment by IVF for no obvious reason may also be considered to be suitable candidates. Certain medical conditions, such as severe heart or renal disease, which might threaten the life of a woman were she to become pregnant, are also indications, provided that she is considered to be fit enough to look after the child after birth and that her life expectancy is reasonable. Women who have requested treatment by gestational surrogacy for purely social or career reasons have not been treated.

## Historical background

The first ever report of a baby being born following treatment by gestational surrogacy was from the USA (Utian *et al*., 1985). The largest experience of both partial and gestational surrogacy is in the USA, where commercial surrogacy arrangements are allowed.

In the UK, one of the few countries in Europe that allows surrogacy (Cohen and Jones, 1999), there was a great deal of controversy following the birth of a child in 1985 in a partial surrogacy arrangement and legislation was rapidly passed to limit but not ban the practice (Surrogacy Arrangements Act, 1985), Under this law, commercial surrogacy arrangements were made illegal. After a great deal of discussion, the British Medical Association (1990) finally agreed that 'It would not be possible or desirable to seek to prevent all involvement of doctors in surrogacy arrangements, especially as the government does not intend to make the practice illegal'. This report set out guidelines for doctors intending to treat patients by gestational surrogacy and made it clear that it should 'only be carried out for exceptional reasons and after intensive investigation and counselling'. In the same year, the Human Fertilisation and Embryology Act (1990) was passed in the UK Parliament and surrogacy was not banned. The most recent report from the British Medical Association (1996) states: 'Surrogacy is an acceptable option of last resort in cases where it is impossible or highly undesirable for medical reasons for the intended mother to carry a child herself'.

Mr Patrick Steptoe and Professor Robert Edwards treated the first couple to request treatment by gestational surrogacy in Europe at Bourn Hall Clinic after extensive discussion (Steptoe, 1987). The independent Ethics Committee to Bourn Hall discussed and approved the arrangement; treatment was initiated, their host became pregnant and a child was born to them in 1989. In the same year, the Ethics Committee drew up guidelines for the treatment of women by surrogacy and the full surrogacy programme was formalized in 1990, and a review of the programme was published (Brinsden *et al*., 2000).

There are still relatively few publications in the literature of experience with gestational surrogacy; the majority of them come from the USA (Sheean *et al*., 1989; Utian *et al*., 1989; Marrs *et al*., 1993). There have also been very few long-term follow-up studies of the babies or the couples involved in surrogacy arrangements (Sheean *et al*., 1989; Utian *et al*., 1989; Fischer and Gilman, 1991; Marrs *et al*., 1993; Blyth, 1994). The American Fertility Society (1986) has recommended that much more attention should be paid to the long-term consequences for the children, hosts and commissioning couples of these arrangements. Since then, a few follow-up studies on the children, hosts and commissioning couples have been published, all of which show reassuring data and positive outcomes (Fischer and Gillman, 1991; Blyth, 1994; Jadva *et al*., 2002; Kleinpeter, 2002a,b; Golombok *et al*., 2003).

## Patient selection and methods

Since only specialist tertiary referral centres treat patients by surrogacy, all couples are usually referred by their family doctor or gynaecologist. The commissioning couple is seen initially for in-depth consultation and independent counselling on all aspects of surrogacy. If they have the appropriate indication for treatment and, in our own practice, if they are within the guidelines laid down by the independent Ethics Committee to Bourn Hall Clinic (Appendix) and the *Code of Practice* of the Human Fertilisation and Embryology Authority (2001), then they are informed that they are required by UK law (Surrogacy Arrangements Act, 1985) to find a suitable host for themselves. They are also informed that the welfare of any child that may be born as a result of treatment, and any children that the host may have, must always be considered very carefully. The host in a gestational surrogacy arrangement may be a member of the commissioning couple's family, a close friend, or the couple may be able to find a suitable host through patient infertility support groups such as, in the UK, ISSUE, CHILD, COTS (Childlessness Overcome Through Surrogacy) or SurrogacyUK, all of which are charitable non-profit organizations. In the USA, highly professional commercial

agencies exist, often run by lawyers, which put couples in touch with women who are willing to act as surrogate hosts.

If the commissioning couple find a host whom they would like to act for them, they are brought to the clinic for further in-depth discussions with both parties to the arrangement. Full details of the treatment are explained to the proposed host and, provided they are considered to be emotionally and physically fit to act in this capacity, couples are then asked to see an independent counsellor, who provides in-depth counselling on all aspects of surrogacy. In the UK and USA, couples are advised to consult lawyers who can specifically advise on the potential legal problems associated with surrogacy (Utian *et al*., 1989; Marrs *et al*., 1993; Brinsden *et al*., 2000).

Provided that the legal and counselling processes have been completed satisfactorily and if there are no obvious reasons why the arrangement should not proceed, a combined medical and counselling report is prepared and, in our own practice, the arrangement is discussed anonymously with the independent Ethics Committee to the Clinic. After a full review, the surrogacy arrangement may be approved, held over pending further information and discussion, or rejected. In every surrogacy arrangement that this Clinic has so far treated, the Clinic has followed the recommendations of the Ethics Committee.

### *Counselling*

The provision of detailed counselling to all the parties involved in surrogacy arrangements is of paramount importance (Boivin *et al*., 2001). The aim is to prepare both couples contemplating this treatment to consider all the facts and to look carefully at the implications for them, both short-term and long-term. For the proposed host and her partner, careful consideration must also be given to the implications of their proposed action on their existing children. The British Medical Association (1990) stated, 'The aggregate of foreseeable hazards should not be so great as to place unacceptable burdens on any of the parties—including the future child'. Among the many issues for discussion with both couples are the following, which have been abstracted from the recommendations of the British Medical Association (1996).

#### *Discussion topics for the commissioning couple*

- Review all alternative treatment options and the implications of not having children in the future.
- The possibility of adoption instead of surrogacy.
- The usefulness and need for in-depth counselling.
- The need to find their own host and where they might find one.
- The potential practical difficulties of treatment by gestational surrogacy.
- The full costs of treatment.
- The potential medical and psychological risks of surrogacy.
- The potential psychological risks, short- and long-term, to a child born by surrogacy.
- The implications of having a multiple pregnancy.
- The degree of involvement that the host may wish to have with the child following the birth.
- The possibility that the child may be born with a handicap.
- The risks to the baby if the host smokes and drinks during pregnancy.
- The possibility that the host may wish to retain the child after birth.
- The fact that surrogacy contracts in the UK are not enforceable.
- The importance of obtaining legal advice.
- The genetic couple are advised to take out insurance cover for the surrogate.

An interesting question that is often raised as part of the medical and nursing advice is whether the genetic mother may be able to breastfeed her baby when it is given up to her by the surrogate host. We have encouraged those genetic mothers who wish to attempt to breastfeed to do so, mainly in order to help them to bond with their child. Our experience so far is that more than half of the women have been able to produce some breast milk and, although the babies may have required bottle supplementation of feeds, the genetic mothers have derived considerable satisfaction from at least trying. The mother can prepare for the possibility of breastfeeding by stimulating the secretion of milk manually or with a breast pump in the few weeks leading up to the delivery of her child by the host. Women are warned of the possibility of disappointment, but they will have the satisfaction of having tried their best.

#### *Discussion topics for the proposed host*

- The full implications of undergoing treatment by IVF surrogacy.
- The possibility of multiple pregnancy.
- The possibility of her family and friends being against her having treatment.
- The medical risks associated with pregnancy and the possibility of delivery by Caesarean section.
- The implications of feelings of guilt on both sides if the host should spontaneously abort a pregnancy.
- The potential effect on her own children of acting as a surrogate.
- The possibility that the host may feel a sense of bereavement when she gives the baby to the commissioning couple.
- The possibility that the child may be born with a handicap.
- The fact that hosts in the UK may only claim 'reasonable expenses'.

As part of the counselling process, discussions should be held with both couples about what they will tell any child born as a result of treatment about their origin and also what the surrogate host will tell her existing children. There is now a much greater willingness for all couples involved with treatment by surrogacy to inform their children about the means by which they were conceived and born (Blyth, 1994; van den Akker, 2000; Golombok *et al*., 2003).

### *Patient management*

#### *Management of the genetic mother*

The majority of genetic mothers referred for treatment will have been fully assessed by their own gynaecologist before referral. This 'work-up' may include a laparoscopy when there

are congenital anomalies, but this is not necessary after hysterectomy. Ovarian function can be tested by obtaining a history of cyclical pre-menstrual symptoms or symptoms of ovulation. One or more estimations of serum FSH, LH and estradiol are useful indicators of likely ovarian response to stimulation. Further evidence of ovarian function may be derived from ultrasound scanning to confirm the presence of ovarian activity and also to confirm their position in the pelvis. The blood groups of the commissioning couple are requested and all parties to the arrangement are tested for hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency virus (HIV) status. Other investigations may be carried out as necessary on an individual basis.

After the full medical assessment has been completed, the counselling process and Ethics Committee review are carried out, following which, treatment of the genetic couple may be started, provided that the host has already been identified, fully counselled and approved.

The management of the IVF treatment cycles of the genetic mothers is normally straightforward. Ovarian follicular stimulation, monitoring and oocyte recovery are routine, and the practices of our own Clinic have previously been described (Brinsden, 1999a; Macnamee and Brinsden, 1999). Other groups with experience of treatment by gestational surrogacy are very similar in their preparation and treatment of all the parties to the surrogacy arrangements (Marrs *et al*., 1993; Meniru and Craft, 1997; Corson *et al*., 1998). The procedures are very much as for normal IVF, but with transfer of the embryos to the host. It is not the treatment of the parties involved in surrogacy that is complicated, but the preparation of them, with the proper provision of advice: legal and medical, the proper provision of counselling and the careful selection of a suitable host.

*Quarantine for HIV status*

Regulations in the UK require that the sperm of the commissioning or genetic husband/partner must be 'quarantined' for 6 months before being used, or the embryos created with his sperm must be frozen and quarantined for 6 months (Human Fertilisation and Embryology Authority, 2001). The genetic husband/partner then has a further test of his HIV status and the embryos may be transferred or the sperm thawed and used to create 'fresh' embryos for transfer to the surrogate host. This policy is governed by the rule which states that sperm used in surrogacy arrangements must be treated in the same way as donor sperm, which, by law in the UK, must be frozen and quarantined for 6 months before it can be used.

***Management of the surrogate host***

In the UK, clinics and commercial agencies are not permitted to recruit hosts on behalf of genetic couples, who must find their own host. They may be helped with this difficult task by non-profit organizations such as ISSUE, CHILD, COTS and SurrogacyUK. Hosts must be normal, fit women who, in our own practice, should be aged ⩽38 years and have at least one child, or, preferably, have completed their families. The relationships between surrogate hosts and genetic mothers in our own series are shown in Table II. The Ethics Committee to Bourn Hall Clinic has recommended (Appendix) that hosts should be married or in a stable relationship and that the husband or partner must be fully involved with the counselling process and made aware of the implications of his partner acting as a surrogate host.

**Table II.** The relationship of the 'genetic mothers' to the 'surrogate host'

| Relationship | No. | % |
|---|---|---|
| Related: | 15 | 36.6 |
| Sister | 9 | 22 |
| Sister-in-law | 5 | 12 |
| Step-mother | 1 | 2.5 |
| Non-related: | 26 | 63.4 |
| Friend | 4 | 10 |
| Agency introduction | 6 | 14.5 |
| Found through own initiatives | 16 | 39 |

From Brinsden (1999b), with permission.

All hosts and their partners are tested for HBV, HCV and HIV status before treatment. Embryo transfer to the surrogate host may be carried out either in a natural menstrual cycle or in a hormone-controlled cycle (Feinman *et al*., 1993; Marcus and Brinsden, 1999).

## Results

Pregnancy and live birth rates per genetic couple and per surrogate host equivalent to or better than for standard IVF can be achieved in treatment by gestational surrogacy. This is because the genetic mothers are usually fit, young women who happen to have no uterus, and from whom embryos are created for transfer to fit, healthy women who have previously had one or more children.

In our own experience, live birth rates of 37–43% per commissioning couple and 34–39% per host surrogate have been achieved, with a mean of only two embryos transferred (Brinsden, 1999b; Brinsden *et al*., 2000). Similarly, Meniru and Craft (1997) in another UK series of women, all of whom had hysterectomies, reported a pregnancy rate of 27.3% (6/22) per treatment cycle started and 37.5% per surrogate host. In the early original series reported by Utian *et al*. (1989), clinical pregnancy rates of 18% (7/59) per cycle initiated and 23% per embryo transfer were achieved. A more recently reported series from the USA showed similar ongoing or delivered pregnancy rates of 36% (172/484 surrogate hosts) (Batzofin *et al*., 1999) with a mean of 5 ± 1.3 embryos transferred. Corson *et al*. (1998) reported a clinical pregnancy rate of 58% per commissioning couple and 33.2% per embryo transfer in their series of women aged <40 years.

All parties involved in the provision of treatment by gestational surrogacy are aware that very little has been carried out in the way of investigation into the long-term outcome of babies born as a result of treatment by surrogacy or the effects on either the commissioning parents or the surrogate host. In the last few years, however, a few groups have reported on the outcome for babies, for commissioning couples and for hosts. In two studies,

researchers who followed up hosts after surrogacy arrangements found that it was a positive experience, with strong feelings of fulfilment and altruism, even when payment was received (Fischer and Gillman, 1991; Blyth, 1994). More recently, reports have started to appear on the follow-up of the commissioning parents and children (Jadva *et al*., 2002; Kleinpeter, 2002a,b; Golombok *et al*., 2003).

The families studied by Golombok *et al*. (2003) showed a greater psychological well-being and adaptation to parenthood by the mothers and fathers of children born through surrogacy arrangements than by the comparison group of parents who conceived naturally. The authors clearly state that these positive findings do not support the negative assumptions of others that the practice of surrogacy is unacceptable in that it represents the co-modification of children. Much of the negative speculation of the past has not been based on fact and the study of Golombok *et al*. puts a positive light on the outcomes of the practice of surrogacy. Similarly, Jadva *et al*. (2002), from the same group, looked at the motivations and experiences of surrogate mothers. They found that their most common motivating factor was a wish to help couples that would not otherwise be able to conceive or carry a child normally. Other hosts indicated that they very much enjoyed being pregnant and that they wanted to help a friend or relative, and many felt fulfilled by their experience. It has commonly been stated that the relinquishing of the child by the host would emotionally scar them long term. This study by Jadva *et al.* is the first to analyse that experience. Contrary to previous suggestions, none of the surrogate mothers experienced difficulties or distress when they relinquished the child to the commissioning couples. Of the few mothers who did experience short-term upset, all were fully recovered with time, and no women reported either moderate or major difficulties in terms of depression or anxiety in the months after birth. The authors conclude that their results 'show that concerns about the surrogate mothers relinquishing the child are unfounded in this group of women. The minor difficulties that the women did report after the birth of the child were short lived' (Jadva *et al*., 2002).

Kleinpeter (2002a;b) studied the experience and decision-making processes of 26 parents who had chosen IVF surrogacy as their method of conception in a California-based programme. In her interviews, she explored their relationship with their host surrogate and the support that they received during the surrogacy process. Of the 26 commissioning parents, most reported having an overall positive experience, none experienced any of the anticipated potential pitfalls and there were no legal difficulties.

Parkinson *et al*. (1999) reviewed the perinatal outcome of pregnancies from gestational surrogacy arrangements and compared them with the outcome of babies resulting from standard IVF. The incidence of low birthweight and prematurity were not different, but pregnancy-induced hypertension and bleeding in the third trimester of pregnancy was up to five times lower in the surrogate host than in standard IVF patient controls. Serafini (2001) found no increase in abnormalities in children born following gestational surrogacy up to the age of 2 years.

## Complications associated with gestational surrogacy

Most of the major problems that are related to surrogacy have been related to natural surrogacy and are mostly legal issues. The issue of 'ownership' and the rights of commissioning couples and surrogate hosts have been aired in the news media. These problems have largely arisen from natural surrogacy arrangements because they are unsupervised by clinicians, counsellors and lawyers, whereas all gestational surrogacy arrangements require the active participation of these professionals. Consequently, the number of complications arising out of gestational surrogacy arrangements is very few. In our own experience of 15 years, no serious clinical, ethical or legal problems have arisen. The few other large published series have reported no major complications. The following are the major problems that could arise during treatment and which are invariably discussed with couples as part of the counselling process before treatment.

- The issue which causes most concern to commissioning couples is that the host may wish to retain custody of the child. This has occurred, but is very rare, particularly in gestational surrogacy arrangements where there is no genetic link to the surrogate mother.
- The prospective parents often express concerns about what would happen if the child were born abnormal. To our knowledge, this has not yet occurred, but it is an issue that must be discussed openly with both parties to a surrogacy arrangement. The fear is that both couples might reject any grossly abnormal child.
- In spite of the reassuring studies that have been carried out on the effects of surrogacy on the host and on the commissioning couples, further large follow-up studies are required, especially on the long-term effects on the children born as a result of surrogacy arrangements.

Issues that were highlighted in our own previously reported series (Brinsden *et al*., 2000) include the following.

- A few of the commissioning women responded poorly to follicular stimulation and achieved relatively small numbers of oocytes following a standard stimulation regimen. The mean number of oocytes recovered in our series was 10, but the range has been between two and 24. Similarly, Meniru and Craft (1997) reported that three of their 11 patients who had previously had a hysterectomy failed to respond to stimulation at all and two other patients produced very few oocytes, which failed to fertilize. The reduced response to stimulation has been attributed to disruption of the vascular supply to the ovaries following surgery (Siddle *et al*., 1987; Meniru and Craft, 1997). Ovarian function after hysterectomy may be compromised in up to 50% of women (Siddle *et al*., 1987), but the responses can be variable (Metcalf *et al*., 1992).
- Unlike post-hysterectomy patients, young women with Rokitansky–Kuster–Hauser (RKH) syndrome usually respond to ovarian follicular stimulation remarkably well (Beski *et al*., 2000). Ben-Rafael *et al*. (1998) reported on four patients who undertook 10 stimulation cycles in their programme with standard doses of hMG and achieved a mean of 14.6 oocytes (range 8–24), with a fertilization rate of 71%. Wood *et al*. (1999) retrieved a mean of 8.7 oocytes with a 53% fertilization rate. Also reassuring to young women with RKH syndrome are the findings of Petrozza *et al*. (1997) that congenital absence of the uterus and vagina was not transmitted as a dominant genetic trait.

A survey carried out on behalf of the British Fertility Society (Balen and Hayden, 1998) of all licensed clinics performing

surrogacy in the UK showed that 29 of the 113 licensed clinics in the UK had carried out surrogacy treatments. The most significant of the problems reported by the clinics were:

- There was one report of a host who failed to surrender the baby immediately after birth, but did so subsequently, without legal intervention.
- One commissioning couple separated just before treatment started.
- There was unwelcome newspaper publicity in one case.
- A number of couples withdrew from treatment following initial counselling (we believe that this is not a negative outcome of counselling, rather a positive one, in that they have been made fully aware of the implications of the treatment).
- Poor responses to follicular stimulation were noted, particularly after Wertheim hysterectomy.

Most clinics stated that there should be greater control of surrogacy, particularly of natural surrogacy, and that, if it was to be performed only within licensed clinics, the appropriate health screening and counselling could be provided and fewer complications would occur.

## Legal and regulatory issues

In the USA, the majority of problems arising out of surrogacy have been associated with natural surrogacy. The earliest major case was known as the 'Baby M case' (Rothenberg, 1988) in which the judge decided that the genetic couple would have precedence for custody of the child over the birth mother. Another celebrated case to come before the California Superior Court was that of Johnson versus Calvert, where the Calverts, who were the genetic parents of the child, were ruled to be the natural parents and awarded custody (Oxman, 1993). Because of the autonomy of individual states in the USA, specific regulations regarding surrogate motherhood differ and some are more specific than others about the rights of the genetic parents over those of the birth mother. Shuster (1991, 1992) has reviewed the complex differences between states very clearly. By the year 2000, 23 States had laws on the practise of surrogacy, but they still differ widely (Andrews and Elster, 2000).

Like the USA, Australia has different regulations in different states. In New South Wales, Western Australia and the Australia Capital Territory, surrogacy is freely available. In Victoria, South Australia and Tasmania, it is not illegal, but the very strict controls on payment and the lack of any binding legal arrangements, makes surrogacy almost impossible to carry out (Leeton, 1991). Couples requiring surrogacy therefore do tend to move from state to state (Johnson, 1999).

The only countries in Europe which allow surrogacy are the UK, Belgium, Holland and Finland (Karcher, 1990; Schenker, 1997b; Cohen and Jones, 1999).

In the UK, treatment by gestational surrogacy is already fully regulated. Because the creation of embryos is involved, it can only be practised in centres licensed by the HFEA. Treatment cannot take place outside of the legal cover provided by the Human Fertilisation and Embryology Act (1990). This should be sufficient to ensure the full provision of clinical, scientific, counselling and legal services to commissioning couples and hosts. There is evidence that the public in the UK are reassured about the current situation on surrogacy in Britain (Bromham, 1992; 1995) and that no great changes are required. However, in 1997, following widespread publicity about a partial surrogacy arrangement which experienced difficulties (Warden, 1997), UK Health Ministers set up a working party to 'take stock and reassess the adequacy of existing law in this difficult area'. The review body was specifically asked to address the following issues.

- To consider whether payments, including expenses, to surrogate mothers should continue to be allowed, and if so, on what basis.
- To examine whether there is a case for the regulation of surrogacy arrangements through a recognized body or bodies; and if so, to advise on the scope and operation of such arrangements.
- In the light of the above, to advise whether changes are needed to the Surrogacy Arrangements Act (1985) and/or Section 30 of the Human Fertilisation and Embryology Act (1990).

The report of the review team (Brazier *et al*., 1997) was presented to the UK Parliament and published in October 1998. Below is a summary of their findings.

- Payments to surrogate mothers should cover only genuine expenses, which should be supported with documentary evidence. Additional payments should be prohibited in order to prevent surrogacy arrangements being entered into for financial benefit.
- Agencies involved in surrogacy arrangements should be registered by the UK Department of Health and operate in accordance with a Code of Practice to be prepared. Specified statistics on surrogacy and guidelines on research should be established by the Health Departments.
- The existing Surrogacy Arrangements Act (1985) and Section 30 of the Human Fertilisation and Embryology Act (1990) should be replaced with a new Surrogacy Act which would address in one statute the main legal principles governing surrogacy arrangements in the UK.
- Parental Orders should only be obtained in the High Court and Judges should be able to order DNA tests and 'Guardians *ad litem*' should be able to check criminal records.
- For a Parental Order to be granted, the commissioning couple should be married and one or both of them be habitually resident in the UK, the Channel Islands or the Isle of Man for a period of 12 months immediately preceding the application for a Parental Order.

To date, the UK Government has not enacted these recommendations.

## Ethical considerations

It is a requirement of the UK's Human Fertilisation and Embryology Act (1990) that the welfare of any child born as a result of treatment and the welfare of any existing children must at all times be taken into account when considering licensed treatment. This tenet guides the management of all couples undertaking treatment by surrogacy in the UK. In our own practice, the advice of the independent Ethics Committee to Bourn Hall Clinic is sought on every surrogacy arrangement. The Bourn Hall Ethics Committee guidelines for surrogacy are given in the Appendix. The Ethics Committee debates each arrangement on its merits and believes that the guidelines should be there for the guidance of the Committee but that they should be reasonably flexible.

## Religious considerations

The Catholic Church is strongly against all forms of assisted conception, particularly those associated with gamete donation and surrogacy (McCormick, 1992). The Anglican Church is less rigid in its views and has not condemned the practice of surrogacy.

Surrogacy is not forbidden in the Jewish religion, which is very much family orientated and which lays a duty on Jews to have children (Hirsh, 1998). In the Jewish religion the child born as a result of surrogacy will belong to the father who gave the sperm and to the woman who gave birth (Schenker, 1997a; Benshushan and Schenker, 1997).

The Islamic view appears to be absolute in that, in the same way as the use of donor sperm is strictly forbidden in all schools of Islamic law, so oocyte donation and surrogacy would not be allowed, except, perhaps, that it might be permissible between wives with the same husband, but debate continues and there are differences in the degree to which Muslims will adhere to the faith (Hussain, 2000).

## Conclusions

In the 18 years since the first reported case of treatment by gestational surrogacy (Utian *et al*., 1985), and in our own experience (Brinsden *et al*., 2000), it has been shown that the treatment of young women without a uterus or who have other clear indications for treatment is successful and relatively free of the complications associated with natural surrogacy. In the UK, gestational surrogacy treatment can only be carried out in clinics licensed by the HFEA, which therefore ensures that proper processes and controls are in place. In the USA, where there is no regulation, the practice of gestational surrogacy is more widespread, and the process is, in many ways, made easier by the fact that surrogate hosts may be paid for their services. Contracts are drawn up between the parties involved with the help of lawyers, all are made fully aware of the legal implications of their actions and a commercial agreement entered into.

The indications for treatment by gestational surrogacy are limited to a small number of women, most of whom have no uterus, suffer from recurrent abortion or who have certain medical conditions, which would threaten their lives if they were to become pregnant. In our own practice, gestational surrogacy cases count for <1% of assisted reproductive treatment cycles (Brinsden *et al*., 2000). Treatment by gestational surrogacy is straightforward, in that routine IVF procedures are used to create embryos from the gametes of the commissioning couple and, in our own practice, a maximum of two embryos are transferred to the surrogate host. The aspects of the treatment that require particular care when making surrogacy arrangements are the selection and in-depth counselling of suitable hosts and the commissioning couples, on both the short- and long-term implications of the treatment. The support of independent counsellors, lawyers and, we believe, an independent ethics committee, are essential in assessing the suitability of individuals for treatment and of the arrangement as a whole.

Our own experience (Brinsden *et al*., 2000) and the experience of others (Utian *et al*., 1989; Marrs *et al*., 1993; Meniru and Craft, 1997; Balen and Hayden, 1998; Batzofin *et al*., 1999) has shown that gestational surrogacy is a successful treatment for women with specific indications for surrogacy and that complications are rare. At all times, if the welfare of any child that may be born as a result of treatment and also of any existing children are the primary consideration, and if in-depth counselling both in the long and the short term are provided, the incidence of complications will be minimal. The support and advice of an independent ethics committee is of inestimable value in guiding a clinic. Their independent review of the surrogacy arrangements does help to prevent many of the complications that could arise from treatment. Gestational surrogacy programmes should be part of comprehensive infertility treatment programmes in larger centres, provided that full back-up by lawyers, counsellors and an ethics committee can be provided.

## Appendix. Bourn Hall Ethics Committee guidelines for surrogacy

### *Introduction*

Bourn Hall Ethics Committee is prepared to consider IVF surrogacy in cases where an embryo or embryos from the commissioning couple are transferred to the uterus of the host. The use of donor oocytes or donor sperm and natural surrogacy may be considered in exceptional circumstances. It is considered that surrogacy should only be undertaken as a last resort. The need to safeguard the welfare of any children born as a result of surrogacy arrangement will be a guiding principle. Every case must be looked at by the Ethics Committee on its own merits, based on information provided by the Clinic.

### *Procedures*

Following examination by a clinician, the prospective genetic parents and host and partner must be counselled by a professional counsellor. If the clinician and counsellor, who are not members of the Ethics Committee, are satisfied, they will prepare a report, a copy of which must be submitted to each member of the Ethics Committee. The case will then be considered by the Ethics Committee in consultation with the clinician and counsellor. If they are satisfied that the case falls within the Guidelines and is acceptable, the Ethics Committee will make their recommendations to the Clinic. The genetic parents and host and her partner will be asked to take independent legal advice and encouraged to take out insurance.

Cases will not be considered if there is any doubt that the genetic couple will comply with the requirements for a Parental Order under Section 30 of the Human Fertilisation and Embryology Act (1990) or subsequent legislation.

### *Categories acceptable for treatment*

- Total or partial absence of the uterus either of congenital origin or after surgery.
- Repeated miscarriage.
- Multiple failure of infertility treatment. The clinicians must be satisfied that there is no reasonable prospect of success in the future.

***Motives considered unacceptable***

- Social reasons.
- Prospective genetic parents with severe health problems. Clinicians and the Committee will need to be satisfied that the strain of bringing up a child might not damage the mother's health so seriously as to jeopardize the welfare of that child and the family.

***Considerations which apply to all cases***

- The Clinic must not be involved in initiating or making arrangements between genetic and host couples.
- The relationship between genetic couple and host must be carefully considered and avoid creating conflicting family relationships.
- Independent counselling must be available to both genetic and host couples.
- HIV, hepatitis B and hepatitis C antibody tests are required of both genetic and host couples.
- The age of the genetic mother and of the host is important. In view of the HFEA Code of Practice, the Committee considers that 35 years should be the maximum age of the genetic mother unless there are exceptional circumstances; however, the Committee will consider genetic mothers up to and including age 38 years. The host should generally be aged <40 years.
- The principal motive of a prospective host should always be to help an infertile couple.
- A prospective host should have had at least one child before becoming a surrogate.
- The commissioning couple in a surrogacy arrangement should be married. The host should preferably be in a stable relationship. If the host is single then she should be adequately supported.

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