Since 1973 the Royal College of Obstetricians and Gynaecologists has regularly convened Study Groups to address important growth areas within obstetrics and gynaecology. An international group of eminent scientists and clinicians from various disciplines is invited to present the results of recent research and to contribute to in-depth discussions. The resulting volume, containing the papers presented, is published within a few months of the meeting and provides a summary of the subject that is both authoritative and up to date.

All healthcare professionals involved in women’s health need to have an awareness of the special antenatal and postnatal problems for the mother having twins or indeed a higher-order multiple pregnancy. There are also particular challenges facing those caring for neonates born from multiple pregnancies.

Contributions to this volume come from multidisciplinary healthcare professionals who are leaders in both the scientific understanding and the clinical management of multiple pregnancy. They address not only issues related to pathophysiology and delivery in multiple pregnancy but also the various potential implications and long-term sequelae for the children. The continuing need to support mothers who give birth to multiple pregnancies is also recognised and addressed.

This volume provides an essential overview of the current literature to those healthcare professionals working within obstetrics, midwifery and paediatrics.
Multiple Pregnancy
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SOME PREVIOUS STUDY GROUP PUBLICATIONS AVAILABLE

Infertility
Edited by AA Templeton and JO Drife

Intrapartum Fetal Surveillance
Edited by JAD Spencer and RHT Ward

Early Fetal Growth and Development
Edited by RHT Ward, SK Smith and D Donnai

Ethics in Obstetrics and Gynaecology
Edited by S Bewley and RHT Ward

The Biology of Gynaecological Cancer
Edited by R. Leake, M Gore and RHT Ward

Multiple Pregnancy
Edited by RHT Ward and M Whittle

The Placenta: Basic Science and Clinical Practice
Edited by JCP Kingdom, ERM Jauniaux and PMS O’Brien

Disorders of the Menstrual Cycle
Edited by PMS O’Brien, IT Cameron and AB MacLean

Infection and Pregnancy
Edited by AB MacLean, IT Regan and D Carrington

Pain in Obstetrics and Gynaecology
Edited by AB MacLean, RW Stones and S Thornton

Incontinence in Women
Edited by AB MacLean and L Cardozo

Maternal Morbidity and Mortality
Edited by AB MacLean and J Neilson

Lower Genital Tract Neoplasia
Edited by Allan B MacLean, Albert Singer and Hilary Critchley

Preeclampsia
Edited by Hilary Critchley, Allan MacLean, Lucilla Poston and James Walker

Preterm Birth
Edited by Hilary Critchley, Phillip Bennett and Steven Thornton

Menopause and Hormone Replacement
Edited by Hilary Critchley, Ailsa Gbbbie and Valerie Beral

Implantation and Early Development
Edited by Hilary Critchley, Iain Cameron and Stephen Smith

Contraception and Contraceptive Use
Edited by Anna Glasier, Kaye Wellings and Hilary Critchley
Multiple Pregnancy

Edited by

Mark Kilby, Philip Baker,
Hilary Critchley and David Field
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DECLARATION OF INTEREST

All contributors to the Study Group were invited to make a specific Declaration of Interest in relation to the subject of the Study Group. This was undertaken and all contributors complied with this request. Philip Bennett holds a patent on the inhibition of nuclear factor kappa B in the prevention of preterm labour and acts as a consultant to pharmaceutical companies that are developing drugs for the prevention of preterm labour. Nicholas Fisk has consultancies with Ferring International, EUMOM Ltd, the Gerson-Lehrman Group and IC Consultants. He is a member of the Ferring UK Obstetric Advisory Board and the Scientific Advisory Board of Omnicyte Ltd, and is an independent member of the Data Safety and Monitoring Board of the US NICHD Twin–Twin Transfusion Syndrome Trial. He has a medico–legal consultancy and undertakes private practice on behalf of the Institute of Obstetrics and Gynaecology Trust, a registered charity. He is a member of the MRC College of Experts. He has written numerous chapters, editorials and reviews, generating modest editorial fees. He holds one patent, and his department holds numerous patents related to obstetrics and gynaecology. Neil Marlow is President of the British Association of Perinatal Medicine and a working member of the Nuffield Council on Bioethics.
Chapter 19

Consensus views arising from the 50th Study Group: Multiple Pregnancy

Consensus expert views relating to clinical practice

1. The risk of multiple pregnancy should be reduced by conservative use of ovarian stimulation with careful monitoring according to published guidelines (RCOG, 1999; NICE, 2004; Grade A).

2. In view of the risks associated with multiple pregnancy, consideration should be given to transferring only a single embryo in women undergoing in vitro fertilisation (Grade A).

3. In view of the changing effects of maternal age and fertility treatment on multiple pregnancy rates, there needs to be a mechanism for recording their impact on the rates of multiple pregnancy.

4. Prepregnancy counselling regarding the risks of multiple pregnancy should be given to a woman undergoing fertility treatment (Grade C).

5. Parents of high order multiple pregnancies (≥3) should be counselled and offered multifetal pregnancy reduction (MFPR) to twins in specialist centres (Grade B).

6. Long-term neurodevelopmental follow-up studies are needed of survivors of multiple pregnancies who have undergone MFPR (Grade C).

7. All women with a multiple pregnancy should be offered an ultrasound examination at 10–13 weeks of gestation (Grade B) to assess:
   (a) viability
   (b) chorionicity
   (c) major congenital malformation
   (d) nuchal translucency for designation of risk of aneuploidy and twin-to-twin transfusion syndrome.

8. All monochorionic twins should have a detailed ultrasound scan which includes extended views of the fetal heart (Grade B).
9. Monochorionic twins require increased ultrasound surveillance from 16 weeks of gestation onwards to detect twin-to-twin transfusion syndrome and growth discordance. This should be offered at an interval of 2 weeks (Grade C).

10. Nuchal translucency based screening should be offered as the preferred method of aneuploidy screening in women with multiple pregnancy (Grade B).

11. Monochorionic twins that are discordant for fetal anomaly must be referred at an early gestation for assessment and counselling in a regional fetal medicine centre (Grade B).

12. Twins that are discordant for fetal anomaly should be managed in fetal medicine centres with specific expertise (Grade C).

13. Hospitals should organise antenatal and postnatal care around specialist-led, multidisciplinary multiple pregnancy clinics (Grade C).

14. The organisation of antenatal twin clinics should be facilitated by care pathways and allow referral to regional fetal medicine centres when appropriate (Grade C).

15. The lead clinician for multiple pregnancy clinics should have expertise in ultrasound and in the intrapartum care of multiple pregnancies (Grade C).

16. Twin-to-twin transfusion syndrome should be managed in conjunction with regional fetal medicine centres with recourse to specialist expertise (Grade C).

17. Fetoscopic laser ablation is the treatment of choice in severe twin-to-twin transfusion syndrome presenting prior to 26 weeks of gestation (Grade A).

18. Single-twin demise in a monochorionic twin pregnancy should be referred and assessed in a regional fetal medicine centre (Grade B).

19. The survivor after single-twin demise in monochorionic twins should have follow-up ultrasound and, if normal, an MRI examination of the fetal brain 2–3 weeks after the co-twin death. Counselling should include the long-term morbidity in this condition (Grade C).

20. Vaginal delivery of twins should be performed in a setting with continuous intrapartum monitoring, immediate recourse to caesarean section, appropriate analgesia and an obstetrician experienced in twin delivery (Grade B).

21. In view of the increased risk of stillbirth in twin pregnancy, elective delivery is recommended between 37 and 38 weeks of gestation (Grade C).

22. Mothers with a multiple pregnancy have a need for specific information, including discussion of delivery and postnatal wellbeing, including breastfeeding (Grade C).

23. The role of midwives and other healthcare specialists is integral to the management of multiple pregnancies within specialist clinics (Grade C).

24. Additional support to women is available from TAMBA and the Multiple Births Foundation, and this should be encouraged (Grade C).

25. There is a need to support women emotionally with multiple pregnancies (Grade A).
There is a need to recognise early signs of perinatal psychological disturbance, which is increased after multiple births, and to offer treatment (Grade A).

Consensus expert views relating to future research

1. The optimum method of delivery of twins at greater than 32 weeks of gestation is unknown. Continuing research may inform this uncertainty.
2. The optimum treatment of early-stage twin-to-twin transfusion syndrome is unclear. This needs to be informed by further research, preferably in the form of a randomised trial investigating conservative management, amnioreduction or laser ablation and their effects on disease progression.
3. There is a need for further multicentre randomised controlled trials evaluating effectiveness and cost effectiveness of a single-embryo transfer policy in in vitro fertilisation.
4. Further research is required to assess the outcome of the single surviving fetus in a monochorionic twin set where in utero therapy has been instigated.
5. Because most epidemiological studies on cerebral palsy were performed before the impact of fertility treatment on multiple births, there is a need for updated surveys to establish the current prevalence of cerebral palsy following assisted conception.
6. There is a need to understand mechanisms of prematurity in multiple pregnancies.
7. There is a need to explore other interventions with the aim of reducing maternal psychological distress.
8. Given the uncertainties about many interventions during multiple pregnancy, it is important to encourage clinical research aimed at improving pregnancy outcome.

Consensus expert views relating to health education/policy

1. There is an urgent need for the establishment of a prospective registry of multiple pregnancies that relates chorionicity to outcome.
2. A prospective cohort registry should evaluate the risks mediating neurological morbidity in multiple pregnancy.
3. The UK regional congenital anomaly registers should collect information regarding plurality and chorionicity.
4. The general health problems related to twinning should be brought more widely into the public domain.
5. There is a need to enhance the provision of antenatal education for multiple pregnancies. This should facilitate realistic preparation for birth and parenting, and should aim to meet the needs of the father as well as the mother.
Key pre- and postnatal events to be offered in pregnancy

**Dichorionic twins**
- Multiples clinic: lead clinician with multidisciplinary team.
- Ultrasound at 10–13 weeks: (a) viability; (b) chorionicity; (c) NT: aneuploidy
- Structural anomaly scan at 20–22 weeks.
- Serial fetal growth scans e.g 24, 28, 32 and then two- to four-weekly.
- BP monitoring and urinalysis at 20, 24, 28 and then two-weekly.
- Discussion of woman’s/family needs relating to twins.
- 34–36 weeks: discussion of mode of delivery and intrapartum care.
- Elective delivery at 37–38 completed weeks.
- Postnatal advice and support (hospital- and community-based) to include breastfeeding and contraceptive advice.

**Monochorionic twins**
- Multiples clinic: lead clinician with multidisciplinary team.
- Ultrasound at 10–13 weeks: (a) viability; (b) chorionicity; (c) NT: aneuploidy/TTTS
- Ultrasound surveillance for TTTS and discordant growth: at 16 weeks and then two-weekly.
- Structural anomaly scan at 20–22 weeks (including fetal ECHO).
- Fetal growth scans at two-weekly intervals until delivery.
- BP monitoring and urinalysis at 20, 24, 28 and then two-weekly.
- Discussion of woman’s/family needs relating to twins.
- 32–34 weeks: discussion of mode of delivery and intrapartum care.
- Elective delivery at 36–37 completed weeks (if uncomplicated).
- Postnatal advice and support (hospital- and community-based) to include breastfeeding and contraceptive advice.