The Ulster Medical Journal Supplement May 2004.

Proceedings of Specialist Registrars in Obstetrics and Gynaecology meeting, Belfast: June 2003

The Ulster Medical Journal Supplement May 2004.

Proceedings of Specialist Registrars in Obstetrics and Gynaecology meeting, Belfast: June 2003

Forward

One hundred and fifty SpROGs (Specialist Registrars in Obstetrics and Gynaecology) made a journey to Belfast for the annual conference in June 2003. Both the President, Professor W Dunlop, and Senior Vice President, Dr M Carty, of the Royal College of Obstetricians and Gynaecologists attended, stressing the importance of this meeting in the College calendar.

More than 100 scientific abstracts were submitted for presentation at this meeting. We hope the readers of the UMJ enjoy the Abstracts selected for publication. The wide ranging list of subjects studied and submitted as abstracts demonstrates the diversity of obstetrics and gynaecology and might even attract a medical student into "the Queen of all specialties"!

In some parts of the world, one in five hundred women die during childbirth. A large number of these patients die from haemorrhage. Our key-note speaker was a true "world authority" on intra-partum problems – just look him up on Medline! Furthermore, he is a Belfast Graduate – Professor Tom Baskett, Consultant Obstetrician and Gynaecologist, IWK Grace Health Centre, Halifax, Nova Scotia, Canada. He spoke on "History of Oxytocics and the management of post partum haemorrhage" and we are pleased to include his lecture in this supplement.

MEETING ORGANISERS

Dan McKenna SpR and Chair of the Northern Ireland Trainees' Committee in Obstetrics and Gynaecology

Steven Adair SpR in O+G

Ian Harley SpR in O+G

David Hunter SpR in O+G

ACKNOWLEDGEMENTS

We thank Professor McClure and Mr Wallace for selecting the abstracts and to the Ulster Medical Journal for assistance. We are grateful to Galen for financial assistance

The Ulster Medical Journal, Supplement, May 2004.

The development of oxytocic drugs in the management of postpartum haemorrhage

Thomas F Baskett

Throughout history obstetric haemorrhage has been a major cause of maternal mortality in both developed and developing countries.[1,2] The oldest work in obstetrics and gynaecology, published toward the end of the first century AD, is attributed to Soranus of Ephesus, who brought together the knowledge of obstetrics, gynaecology and paediatrics of that era.[3] Soranus gives no account of oxytocic medications but does give some sensible advice on the general management of hyopvolaemic shock associated with postpartum haemorrhage, advising that the woman should 'lie down in a relatively small, dark and moderately cool room upon a hard bed . . . raised a little at the foot'. He also described what could be regarded as the forerunner of the Medical Antishock Trousers (MAST): 'and the extremities should be gripped tightly and bandaged, for the compression resulting from this squeezing is transmitted all the way to the affected part'.[3]

Uterine atony accounts for 80-85% of all cases of primary postpartum haemorrhage (PPH). Once the placenta separates from the uterine wall in the third stage of labour, it leaves a very vascular placental bed with torn blood vessels. The uterine musculature, through which the blood vessels that supply the placental bed pass, is arranged in an interlocking criss-cross fashion, such that contraction of these muscle fibres effectively constricts the blood vessels.[4] This anatomical and physiological mechanism of haemostasis is sometimes known as the 'living ligatures' or 'physiological sutures' of the uterus. Indeed, it has been known for centuries that contraction of the uterus was necessary to stop bleeding after separation and delivery of the placenta. In the Ebers Papyrus (circa 1500 BC), drugs used to promote uterine contractions included hemp in honey, celery in milk, juniper berries and fly excrement.[5] Details of the method of collection, dose, and route of administration of the latter are not given. Dioscorides, a physician who lived in the 1st century AD, studied and documented the medicinal use of plants in his major work *De Materia Medica*, which formed the basis of therapeutic practice of Western medicine until the 17th century. He claimed oxytocic properties for the cyclamen plant and said that if the root of the cyclamen plant was 'tyed about her it doth hasten the birthe'.[6] John Gerard, Royal Herbalist and Curator of the College of Physicians Physic Garden in London in the 17th century, attributed similar oxytocic properties to the plant chervil.[7]

ERGOT AND ITS ALKALOIDS

The first effective oxytocic drug was ergot, derived from the fungus *Claviceps purpurea* that grew on the ears of cereal grains, particularly rye. The disease ergotism was caused by eating rye bread contaminated with the fungus ergot. Epidemics of ergotism have occurred for more than 1000 years and were caused by wet seasons leading to damp cereal crops which favoured growth of the fungus. These epidemics tended to occur in areas of France, Russia and Southern Germany where the cereal rye was grown extensively. The usual manifestation was gangrene of the peripheries associated with progressive vasospasm. The more rare type of ergotism mainly involved the central nervous system and was known as the convulsive variety. During epidemics of ergotism it was observed that pregnant women would miscarry and midwives therefore deduced that ergot caused uterine contractions and began using it for prolonged labour with ineffective uterine contractions.[8,9] It was administered by grinding up the grains of the fungus and administering it in

Department of Obstetrics and Gynaecology, Dalhousie University, Halifax, Nova Scotia, Canada.

Thomas F. Baskett, MB, FRCS, FRCOG.

Correspondence to Thomas F Baskett, Department of Obstetrics and Gynaecology, Dalhousie University, 5980 University Avenue, Room 6039, Halifax, Nova Scotia B3J 3G9, Canada. Telephone: 902-470-6788. Facsimile: 902-470-8640.

powder form. It came to be called pulvis ad partum (the powder of birth). It was probably used first and most extensively by midwives in Germany, and the first written reference is by Adam Lonicer in his *Krauterbuch* or Book of Herbs in 1582.[10] In 1787 Paulitsky noted the increasing use of ergot in labour, claiming: ... all are reassured that it makes labour quicker and more powerful than any other remedies'.[11]

The use of ergot in obstetrics increased following the 1808 publication of a letter by John Stearns in the *Medical Respository of New York.*[12] Working in rural New York, Stearns apparently learned of ergot from 'an ignorant Scottish midwife'. In his letter, written to a colleague in 1807, he outlined the advantages of ergot to 'expedite lingering parturition'. He observed that the pains stimulated by ergot were 'peculiarly forcing'. He also noted that the response to ergot could be very rapid, claiming "since I have adopted the use of this powder I have seldom found a case that detained me more than three hours".[12] Unfortunately, the response to ergot was unpredictable and as a result tetanic uterine contractions led to fetal asphyxia, stillbirth and uterine rupture. Stearns himself was later to emphasize the 'necessity of extreme caution'.[13] The misuse of ergot and its complications were summarized by David Hosack who felt the name should be changed to *pulvis ad mortem.*[14] Gradually, due to the influence of Hosack, Stearns and Oliver Prescott of Massachusetts,[15] the use of ergot was emphasized for postpartum haemorrhage and not given before the birth of the infant.

By the late 19th and early 20th century analysis of the alkaloids contained in ergot was underway.[16] The alkaloids ergotoxine[17] and ergotamine[18] had oxytocic properties and became the standard drugs for this purpose. In 1932, Chassar Moir, then a registrar in obstetrics at the University College Hospital in London, found that the powerful oxytocic effect was present in the aqueous extract of ergot.[19] Working with the research chemist Harold Dudley, he studied dozens of chemical fractions of the aqueous extract of ergot, testing the oxytocic properties on postpartum patients with intrauterine pressure measurements. After three years, the pure crystalline substance, ergometrine, was discovered.[20] Almost simultaneously from three other centres: Davis in Chicago,[21] Thompson in Baltimore[22] and Stoll in Switzerland[23] the isolation of a new water-soluble extract of ergot was announced. All of these were ultimately shown to be identical. The preparation was called ergometrine in the UK and Commonwealth countries, ergonovine in the United States and ergobasine in Switzerland. In 1940, Edward Davis of Chicago was the first to advocate active management of the third stage of labour with 0.2 mg ergometrine given intravenously with delivery of the fetal head.[24] Davis and his colleague, Melbourne Boynton, later reported 2000 cases treated in this fashion and found a reduction in postpartum haemorrhage with no increased risk of retained placenta.[25] Shortly after ergometrine was discovered a study of 500 consecutive cases was undertaken at the University College Hospital in London but not reported until 1947.[26] Another observational study from Manchester also showed that the routine use of ergometrine reduced the blood loss and need for blood transfusion.[27] The first comparative study was carried out by Dorothy Daley from Carlshalton and published in 1951.[28] She found that those patients receiving active management with ergometrine had an approximately 40% lower risk of postpartum haemorrhage. Interestingly, this level of risk reduction for PPH was later substantiated in randomized controlled trials.[29]

POSTERIOR PITUITARY EXTRACT

Physiological experiments by Henry Dale on posterior pituitary extract showed that it had an oxytocic effect.[30] Dale gave some samples to the obstetrician William Blair Bell (later the founding president of the Royal College of Obstetricians and Gynaecologists) who published its use in clinical practice in 1909.[31] He noted the dramatic oxytocic effect in cases of atonic postpartum haemorrhage. Posterior pituitary extract was used in obstetrics and, unfortunately, the same mistakes made with ergot 100 years before were repeated *vis-a-vis* excessive uterine activity, fetal asphyxia and uterine rupture. In 1928, Kamm and colleagues, working in the Parke-Davis laboratories in the United States, showed that pituitary extract could be split into two fractions, one oxytocic (Pitocin) and the other vasopressin (Pitressin).[32] However, pitocin did have a certain amount of vasopressin so, while it was safer than the original extract, it was not devoid of vasopressor side effects.

A major advance was the work of Du Vigneaud and his colleagues at Cornell University in New York who identified the chemical structure of the active principles of oxytocin and vasopressin; for

which work Du Vigneaud later received the Nobel Prize. In 1953 he achieved synthesis of oxytocin.[33] Thus, by the 1950s both oxytocin and ergometrine were in widespread use both for the prevention and the management of postpartum haemorrhage. By the 1980s several randomised controlled trials and subsequent meta analysis confirmed the effectiveness of active management of the third stage of labour in reducing blood loss, postpartum haemorrhage, the need for therapeutic doses of oxytocic drugs and the need for blood transfusion.[29, 34] Active management of the third stage may also reduce the risk of acute uterine inversion.[35] Both oxytocin and ergometrine are effective but the side effect profile of ergometrine is greater so that oxytocin has become the drug of first choice.[34]

DEVELOPMENT OF PROSTAGLANDINS

Prostaglandins are a ubiquitous group of substances produced in virtually all tissues. The New York gynaecologist, Raphael Kurzok, noticed that during artificial insemination semen was often actively expelled from the uterus. He therefore carried out experiments with strips of uterine muscle and demonstrated its contractility in response to semen.[36] This work was confirmed by Goldblatt in England [37] and by von Euler[38] at the Karolinska Institute in Stockholm. Von Euler, believing the active substance to come from the prostate gland, named it 'prostaglandin'.[39] In the 1960s Sune Bergstrom and his colleagues in Stockholm identified the individual members of the prostaglandin group.[40] Prostaglandin F2 α was most extensively investigated and it was found that by incorporating a methyl group at the 15-position its half life was extended. The first analogue of PGF2α was 15-methyl PGF2α (carboprost).[41] This was subsequently shown to be effective in many cases of uterine atony that were unresponsive to oxytocin and ergometrine.[42] The use of prostaglandins to prevent and treat postpartum haemorrhage due to uterine atony was first suggested by Bygdeman and his colleagues in 1968.[43] Shigeo Takagi of Tokoyo was the first to use direct intramyometrial injection of prostaglandin F2α for atonic postpartum haemorrhage.[44] Corson *et al* [45] and Hayashi *et al*[46] found that 15-methyl PGF2α was better with fewer gastrointestinal and vasopressor side effects but with strong uterotonic activity.

The need for a safe, cheap and widely available oxytocic for the prevention and management of uterine atony led to the investigation of another prostaglandin, the PGE1 analogue misoprostol, for this purpose.[47] The first use of this agent for the prevention of PPH was by El-Rafaey and his colleagues at the University College Hospital, London where Chassar Moir had carried out his classic work on ergometrine 75 years before.[48] Others have used misoprostol by the rectal route good effect.[49, 50]

Thus, the modern era of oxytocic drug development started with the discovery of ergometrine in 1935, and has occurred in approximately 20 year epochs over the last 70 years (Table). Oxytocin and ergometrine, or a combination thereof, remain the standard oxytocics for the prevention and treatment of PPH. The more expensive 15-methyl PGF2α is a valuable alternative in cases unresponsive to oxytocin and/or ergometrine. Misoprostol does not require injection for its administration and is the cheapest, most stable, and easily stored of all oxytocic drugs. As such it has the most potential for widespread use and benefit in the developing world, where 99% of maternal deaths due to PPH occur. However, the efficacy, dose, and route of administration (oral, sublingual, rectal) have yet to be delineated.[51]

TABLE

Evolution of Oxytocic Drugs for PPH

Year	*Author*	*Drug*
~1500 BC	Ebers papyrus[5]	celery, hemp, juniper, fly excrement
~1000 AD	Dioscorides [6]	cyclamen
1582	Lonicer [10]	ergot
1787	Paulitsky [11]	ergot
1808/1822	Stearns [12, 13]	ergot
1813	Prescott [15]	ergot
1906	Barger [17]	ergotoxine
1909	Blair Bell [31]	pituitary extract
1928	Kamm [32]	pitocin
1930s	Moir,[20] Davis,[21] Thompson,[22] Stoll [23]	ergometrine
1950s	Du Vigneaud [33]	oxytocin
1970s	Bergstrom,[40] Karim [41]	15-methyl PGF2α (carboprost)
1990s	El-Rafaey [48] and others [49, 50]	misporostol

REFERENCES

1. Gülmezoglu A M, Hofmyer G J. Prevention and treatment of postpartum haemorrhage. In: MacLean A B, Neilson J P (eds). Maternal Morbidity and Mortality. London: RCOG Press, 2002. p241-51.
2. Baskett T F. Some 20th century milestones in obstetrics and gynaecology. In: O'Brien P M S (ed). The Yearbook of Obstetrics and Gynaecology. London: *RCOG Press 2000*; **8**: 1-9.
3. Soranus' Gynaecology. Translated by: Owsei Temkin, Baltimore: The Johns Hopkins Press, 1956.
4. Baskett T F, Arulkumaran S. Intrapartum Care. London: RCOG Press. 2002. p31-42.
5. Nunn J F. Ancient Egyptian Medicine. London: British Museum Press, 1996. p193-5.
6. Gunther R T. The Greek Herbal of Dioscorides, Book 2. London: Hafner Publishing, 1968. p203.
7. Gerard J. The Herbal or General History of Plants (complete 1633 edition as revised and enlarged by Thomas Johnson). New York: Dover Publications, 1970. p1040.
8. Haller J S. Smut's dark poison: Ergot in history and medicine. Trans Studies Coll Phys. *Philadelphia* 1986; 3: 62-78.
9. Baskett T F. A flux of the reds: evolution of active management of the third stage of labour. *J R Soc Med* 2000; **93(9)**: 489-93.
10. Moir J C. The history and present day use of ergot. *Can Med Assoc J* 1955; **72(10)**: 727-34.
11. Paulitsky F. Pulvis ad partum aus dem Mutterkorn. *Neues Mag für Arzte* 1787; **9**: 44.
12. Stearns J. Account of the pulvis parturiens, a remedy for quickening childbirth. *Med Repository NY* 1808; **11**: 308-9.
13. Stearns J. Observations on the secale cornutum or ergot, with directions for its use in parturition. *Med Rec* 1822; **5**: 90.
14. Hosack D. Observations on ergot. In: Essays on various subjects of medical sciences. New York, 1824. p 295-301.
15. Prescott O. A dissertation on the natural history and medicinal effects of secale cornutum or ergot. Andover: Flagge and Gould, 1813. p14.
16. Tanret C. Sur la presence d'une nouvelle alkaloide, l'ergotine, dans seigle ergote. *CR Acad Sci* 1875; **81**: 896-7.
17. Barger G, Carr F H, Dale H H. An active alkaloid from ergot. *BMJ* 1906; **2**: 1792.
18. Stoll A. Zur Kenntins der Mutterkorn alkaloide. *Verhand der Schweiz Naturl Ges* 1926; **6**: 190.
19. Moir J C. The action of ergot preparations on the puerperal uterus. *BMJ* 1932; **1**: 1119-22.
20. Dudley H W, Moir C. The substance responsible for the traditional clinical effect of ergot. *BMJ* 1935,1: 520-3.
21. Davis M E, Adher F L, Rogers G, Kharasch M S, Legault R R. A new active principle in ergot and its effects on uterine motility. *Am J Obstet Gynecol* 1935; **29**: 155-67.
22. Thompson M R. The active constituients of ergot. A pharmacological and chemical study. *J Am Pharm Soc* 1935; **24**: 185-96.
23. Stoll A, Burckhardt E. L'ergobasine, nouvel alkaloide du l'ergot du seigle, solubile das l'eau. *Bull Sci Pharm* 1935; **42**: 257-66.
24. Davis M E. Postpartum hemorrhage. *Am J Surg* 1940; **48**: 154-63.
25. Davis M E, Boynton M W. The use of ergonovine in the placental stage of labor. *Am J Obstet Gynecol* 1942; **43**: 775-90.
26. Flew J D S. Discussion on the management of the normal third stage of labour and of haemorrhage therein. *Proc R Soc Med* 1947; **40**: 370-1.
27. Shaw D A F. Oxytocic drugs in the third stage of labour. *J Obstet Gynaecol Br Emp* 1949; **56**: 833-7.
28. Daley D.The use of intramuscular ergometrine at the end of the second stage of normal labour. *J Obstet Gynaecol Br Emp* 1951; 58: 388-97.
29. Prendiville W J, Elbourne D R, Chalmers I. The effect of routine oxytocic administration in the management of the third stage of labour: an overview of the evidence from controlled trials. *Br J Obstet Gynaecol* 1988; **95(1)**: 3-16.
30. Dale H H. The action of extracts of the pituitary body. *Biochem J* 1909; **4**: 427.
31. Bell W B. The pituitary body and the therapeutic value of the infundibular extract in shock, uterine atony and intestinal paresis. *BMJ* 1909; **2**: 1609-13.
32. Kamm O, Aldrich T B, Grote I W, Rowe L W, Bugbee E P. The active principles of the posterior lobe of the pituitary gland. I. The demonstration of the presence of two active principles. II. The separation of the two principles and their concentration. *J Am Chem Soc* 1928; **50**: 573.
33. Du Vigneaud V, Ressler C, Swan J M, Roberts C W, Katsoyannis P G, Gordon S. The synthesis of an octapeptide with the hormonal activity of oxytocin. *J Am Chem* Soc 1953; **75**: 4879-90.
34. Elbourne D R, Prendiville W J, Chalmers I. Choice of oxytocic preparation for routine use in the management of the third stage of labour: an overview of the evidence from controlled trials. *Br J Obstet Gynaecol* 1988; **95(1)**: 17-30.
35. Baskett T F. Acute uterine inversion: a review of 40 cases. *J Obstet Gynaecol Can* 2002; **24(12)**: 953-6.
36. Kurzrok R, Lieb C C. Biochemical studies on human semen. II. Action of semen on human uterus. Proceedings: *Experimental Biology and Medicine (NY)* 1930; **28**: 268-72.
37. Goldblatt M W. A depressor substance in seminal fluid. *J Soc Chem Indust* 1933; **52**: 1056-7.

38. von Euler U S. An adrenal-like action in extracts from prostatic and related glands. *J Physiol* 1934; **81**: 102-12.

39. von Euler U S. On the specific vaso-dilating and plain muscle stimulating substances from accessory genital glands in man and certain animals (prostaglandin and vesiglandin). *J Physiol* 1936; **88**: 213-4.

40. Bergstrom S, Ryhag E R, Samuleson B, Sjovall J. The structure of prostaglandin E, F1 and F2. *Acta Chemica Scand* 1962; **16**: 501-2.

41. Karim S M M, Sharma S D, Filschie G M. Termination of pregnancy with 15-methyl analogues of prostaglandins E2 and F2. *J Reprod Med* 1972; **9**: 383-5.

42. Annathasubramanim I, Kuntai R, Sivariman R, Raghavan K S. Management of intractable postpartum haemorrhage secondary to uterine atony with intramuscular 15-methyl PGF2α. *ActaObstet Gynecol Scand* 1988; **145(suppl)**: 17-19.

43. Bygdeman M, Kwon S U, Murkergee T, Wiqvist N. Effect of intravenous infusion of prostaglandin E1 and E2 on motility of the pregnant human uterus. *Am J Obstet Gynecol* 1968; **102(3)**: 317-26.

44. Takagi S, Yoshida T, Togo Y *et al.* The effects of intramyometrial injections of prostaglandin F2a on severe postpartum hemorrhage. *Prostaglandins* 1976; **12(4)**: 565-79.

45. Corson S L, Bolognese R J. Postpartum uterine atony treated with prostaglandins. *Am J Obstet Gynecol* 1977; **129(8)**: 918-9.

46. Hayashi R H, Castillo M S, Noah M L. Management of severe postpartum hemorrhage due to uterine atony using an analogue of prostaglandin F2 alpha. *Obstet Gynecol* 1981; **58(4)**: 426-9.

47. Collins P W. Misoprostol: discovery, development and clinical applications. *Med Res Rev* 1990; **10(2)**: 149-72.

48. El-Refaey H, O'Brien P, Morafa W, Walder J, Rodeck C. Use of oral misoprostol in the prevention of postpartum haemorrhage. *Br J Obstet Gynaecol* 1997; **104(3)**: 336-9.

49. O'Brien P, El-Rafaey H, Gordon A, Geary M, Rodeck C H. Rectally administered misoprostol for the treatment of postpartum hemorrhage unresponsive to oxytocin and ergometrine: a descriptive study. *Obstet Gynecol* 1998; **92(2)**: 212-4.

50. Bamigboye A A, Hofmeyr G J, Merrell D A. Rectal misoprostol in the prevention of postpartum hemorrhage: a placebo-controlled trial. *Am J Obstet Gynecol* 1998; **179(4)**: 1043-6.

51. Villar J, Gulmezoglu A M, Hofmeyr G J, Forna F. Systematic review of randomized controlled trials of misoprostol to prevent postpartum hemorrhage. *Obstet Gynecol* 2002; **100(6)**: 1301-2.

MATERNAL INTRAVAGINAL PROSTAGLANDIN E_2 GEL PRIOR TO ELECTIVE CESAREAN SECTION AT TERM TO INDUCE CATECHOLAMINE SURGE IN CORD BLOOD-A RANDOMIZED, PLACEBO CONTROLLED STUDY

Singh M, Patole S, Rane A, Naidoo D, Buettner P.

Departments of Obstetrics and Neonatology, The Townsville Hospital, Queensland, Australia.

BACKGROUND

Catecholamine surge during vaginal delivery is known to inhibit lung liquid secretion, stimulate its absorption, and promote surfactant secretion thus enhancing lung aeration. Neonatal respiratory distress and transient tachypnea of the newborn continue to complicate elective cesarean section (ECS) deliveries at "term". Intravaginal prostaglandin E_2 gel is commonly used to induce labour. We hypothesised that application of intravaginal prostaglandin E_2 gel prior to ECS will induce catecholamine surge in umbilical arterial blood.

METHODS

36 consenting mothers were randomly allocated to receive 2 mgm of intravaginal prostaglandin E_2 gel [Study: n=1 8] or equal volume of KY jelly as a placebo [Control: n=18] 60 minutes prior to an ECS ≥38 weeks' gestation. The obstetric and neonatal teams were blinded to the randomization status of enrolled mothers. Umbilical cord blood samples were collected at delivery for blood gas analysis and catecholamine levels.

RESULTS

Median (interquartile range) noradrenaline levels in the umbilical arterial blood were significantly higher in study Vs control group [15.9 (9.8, 28.92) ng/l Vs 4.6(1.65, 2.75) ng/l, $p<0.05$]. Treatment related complications did not occur.

CONCLUSION

Labour related catecholamine surge could be simulated by intravaginal prostaglandin E_2 gel and therefore reduce significant respiratory morbidity following elective caesarean section.

COMPARISON OF PERI-OPERATIVE OUTCOMES FOR ABDOMINAL HYSTERECTOMY BETWEEN THE LIGASURE™ BIPOLAR VESSEL SEALER AND CONVENTIONAL SUTURES. A CASE-CONTROL STUDY.

Adair S, Tanda L, and Robson S.

Department Obstetrics and Gynaecology, The Canberra Hospital, Yamba Drive, Canberra, ACT, Australia.

AIMS

To study the rates of pain, febrile complications and inpatient stay post-operatively in the study group compared to routine abdominal hysterectomy.

BACKGROUND

Hysterectomy is still one of the most common major surgical procedures performed for Australian women. Although vaginal or laprascopically-assisted procedures are encouraged because of the recognised reduction in operative time and post-operative pain, the majority of hysterectomies are still performed by an abdominal approach. The ligasure bipolar vessel sealer when used abdominally will reduce operative time and was fell to reduce post-operative complications and hospital stay.

METHODS

A blinded retrospective review of post-operative data for all patients undergoing abdominal hysterectomy for period 1st January 2001 until 30th June 2002.

RESULTS

Study group (n=23) and Control group (n=25) were matched for demographic factors.

Variable	*Ligasure Group (n=23)*		*Suture Group (n=25)*		
Mean Weight (Kg)	70.0	(63,5,76.6)	72.9	(68.6,77.2)	ns
Anaesthetic Time (mins)	70.5	(66.1,74.9)	86.7	(80.9,92.6)	**p<0.05**
Narcotic Use (units)	46.0	(35.1,56.9)	59.0	(46.2,71.8)	ns
Febrile Complications	0/23		6/25 (24%)		**p<0.05**
Blood Transfusion	1/23 (4.3%)		4/25 (16%)		ns
Return to Theatre	1/23		1/25		ns
Inpatient Stay (days)	4.21		4.56		p=0.3049

CONCLUSION

This study has confirmed that abdominal hysterectomy using the Ligasure system, is associated with significantly less operating time and post-operative febrile complications when compared to standard suturing techniques. Although less in the study group, the use of narcotics for postoperative pain and total post-operative inpatient stay, were not shown to be significantly different.

BEWARE THE MIDLINE PELVIC MASS

Fowler G, Adams E.

Liverpool Women's Hospital, UK.

CASE SUMMARY

A healthy 20 year old student was referred to clinic with four year history of acne, hirsutitism and irregular periods. Full hormone profile and ultrasound of ovaries were requested. Ultrasound reported a large simple cyst, 11x11x10cm, slightly to the right of the midline, probably arising from the right ovary. Ultrasound or laparoscopic guided aspiration were not undertaken due to the cyst size and risk of reformation. Ca125 was 24KU/L.

Laparotomy revealed a 10x10cm retroperitoneal mass, anterior to the sacrum and filling the pelvis. Uterus, tubes and ovaries were normal. Differential diagnosis was a retroperitoneal cyst however anterior meningocele was not excluded. Laparotomy was therefore abandoned. Urgent MRI diagnosed a large anterior sacral meningocele.

Neurosurgical review, confirmed the absence of neurological symptoms. Examination found a small sacral dimple and slightly reduced left knee jerk but otherwise neurologically normal. Review of family history found her sister had an anterior sacral meningocele removed shortly after birth. Anterior sacral meningocele is a rare condition with only 182 cases reported since 1837. Most cases present with gastrointestinal or urogenital signs or symptoms. Familial occurrence has been reported on 7 occasions with autosomal dominant inheritance suggested.

Attempts to surgically remove this cystic mass at time of laparotomy could have resulted in potentially fatal consequences. This case acts a reminder to all gynaecologists to remember the differential diagnosis of anterior meningocele in cases of midline pelvic masses and consider further imaging.

BIRTH PLANS: TELL ME WHAT YOU WANT, WHAT YOU REALLY, REALLY WANT

Mawhinney S,* Wallace N,** Hamilton R A,* Hill D A.**

The Ulster Hospital, Belfast, UK.
*Dept. of Obstetrics and Gynaecology.
**Department of Anaesthetics.

AIM

To assess the predictive value of antenatal birth plans regarding: maternal wishes for labour analgesia, and knowledge and attitude to instrumental delivery.

METHOD

1. An interview survey of 100 postnatal women regarding analgesia use in labour (planned and actual.)
2. Birth plan review and questionnaire surveys of antenatal and postnatal women regarding instrumental delivery.

RESULTS

Analgesia

80% of patients documented a birth plan for labour analgesia.

Recommendation from friends (if nulliparous) and previous experience (if multiparous) were the reasons most commonly given for choice of planned analgesia. Only 5% of patients planned for analgesia because of professional advice.

Analgesia requirements increased significantly from the documented birth plan for nulliparous patients ($p = 0.039$).

Concordance (or not) with birth plan analgesia made no statistical difference to maternal satisfaction post partum

Instrumental delivery:

21% of birth plans highlighted concerns/ preferences regarding instrumental delivery.

Knowledge and attitude to instrumental delivery was attributed to non-professional sources by 58% of patients (i.e. family, friends, books, magazines and television.) 41% of patients learnt about instrumental delivery at parentcraft classes.

83% of antenatal patients had concerns about instrumental delivery. Despite this 92% of patients who had an instrumental delivery would agree to this again in a subsequent labour.

CONCLUSIONS

Birth plans are not predictive.

Birth plan preferences often reflect anecdotal advice from patient's friends and family.

Parentcraft classes with multidisciplinary input provide an ideal opportunity to address these findings.

AUDIT-CONSENT IN PRACTICE

Soydemir D F *
Ranavanga M **
In cojunction with Deadliners-NW Research committee

* Rochdale Infirmary
** Tameside Hospital, UK

AIM

With the publication of the Departments of Health (DOH) "good practice in consent initiative" we decided to retrospectively review how two district hospitals within the North West of England had implemented the new consent forms into their own practice.

METHODS

We reviewed 50 laparoscopic sterilisations and 100 emergency Caesarean sections in regard to the documented risks and benefits and grade of doctor consenting. We compared our results with the criteria as recommended in the guidelines compiled by the Department of Health for good practice.

RESULTS

We found that documentation was related to grade of doctor obtaining out consent. With laparoscopic sterilisation risks were often inadequately explained, being frequently obtained by an SHO in pre-operative clinic. On the other hand consenting for emergency sections appeared to be of better quality perhaps because it was more often carried out by a senior doctor and the risks were better defined. Another important issue is that a copy of the consent form, being a legal document, should be offered to the patient. In one of the hospitals this was rarely the case.

CONCLUSION

Although counselling and completion of the new consent form is time-consuming it should be carried out to a high standard. The ideal is that the doctor carrying out the procedure should obtain consent. However, if not, at least junior doctors should be educated how to complete the form perhaps with the use of a proforma for the most common operation at their induction into the hospital.

DECLINE IN INCIDENCE OF ANENCEPHALY IN DUBLIN OVER A FOURTY YEAR PERIOD

Dunn E, O'Herlihy C

Department of Obstetrics & Gynaecology, University College Dublin, National Maternity Hospital, Ireland.

OBJECTIVE

Document the incidence of anencephaly from 1960-1999 in Dublin.

DESIGN

Retrospective study.

SETTING

Coombe, Rotunda and National Maternity Hospitals'.

POPULATION

Analysis of births where an anencephaly was documented.

METHODS

Incidence was assessed from the Annual Clinical Reports, Fetal Assessment and Pathology Departments.

MAIN OUTCOME MEASURES

Identify factors including maternal age, parity and sex of the infant deemed relevant to the observed decline.

RESULTS

Total of 1,675 cases of anencephaly were identified, a decrease in incidence from 7.9 to 0.2 per 1,000 total births. Figures were generally not influenced by termination. Prior to 1970 data was difficult to assess, analysis of maternal age, parity and sex of the infant confined to the years 1971-2000.

Sex ratio altered dramatically with a falling female preponderance. Anencephaly varied greatly with maternal age, greatest decline in women between 20-24 and 35 and over. Similarly, incidence fell greatest in women of higher parity.

CONCLUSION

These results show that the incidence of anencephaly has fallen dramatically from 7.9 in 1960 to 0.2 per 1000 total births in1999. This decline may be the result of increased counselling of mothers of previously affected pregnancies, improved nutritional status, natural trend or the protective effect of the OCP. However the decline in the female preponderance may reflect shifting environmental influence. This is an actual decline with the potential contribution of selective termination small.

PREGNANCY OUTCOMES IN PREGNANCIES WITH FALSE POSITIVE MIDTRIMESTER MULTIPLE MARKER SCREENING TESTS (MMST) FOR DOWN'S SYNDROME.

Lartey J P, Guirgis R R, Hamisa M

AIMS/OBJECTIVES

To determine whether pregnancies with false positive MMST are associated with increased pregnancy complications.

MATERIALS AND METHODS

The pregnancy outcomes of 211 pregnancies with false positive MMST were compared to a control group of 300 patients with low-risk MMST results. Both groups were from a low-risk population, matched for age and parity and gestation confirmed with ultrasonography. Adverse outcomes (preterm delivery < 37 weeks gestation, low-birth weight (LBW) <2500 gm, fetal loss >20 weeks gestation, congenital infections and abnormalities, APGAR scores <7 at 5 minutes and operative deliveries).

RESULTS

Chi-square analysis and Fisher's tests were used for comparison as appropriate. Preterm delivery 12 of 211(5.6%) versus 14 of 300(4.6%), odds ratio 1.2 CI (0.56-2.7); LBW 5 of 211(2.3%) versus 5 of 300 (1.6%) OR 1.5 CI (0.43-5.3); Instrumental delivery 20 of 211 (9.4%) versus 22 of 300(7.3%) OR 0.85 Il (0.46-1.6); and caesarean section 45 of 211 (21.3%) versus 51 of 300(17%) OR 1.3 CI (0.84 -2.1); APGAR scores <7 at 5 minutes 12 of 211(5.6%) versus 17 of 300 (5.6%) OR 0.88 CI (0.39- 2.0). No fetal loss or congenital infections occurred. There was 1 case of rudimentary extra-digit in the false positive group.

CONCLUSION

Women with a false positive MMST and a normal mid-trimester obstetric sonogram are not at an increased risk of pregnancy complications and adverse fetal outcomes. These women need to be managed in accordance with other risk factors that may be present in their history or background.

IMPACT OF INDUCTION OF LABOUR ON CLINICAL WORKLOAD

Cartmill J L, Bryson C, Kyle H, Casement M
Royal Jubilee Maternity Service, Belfast, UK.

AIM

To determine the effect of Induction of Labour (IOL) on timing of delivery and the resulting impact on clinical workload, particularly outside "normal" working hours.

METHODS

Retrospective casenote review of all patients who underwent IOL during the month of September 2001.

RESULTS

Induction of labour was undertaken in 146 patients during the period studied (32% of a total of 463 deliveries). Details from 16 cases were available for analysis. 50% of cases were primigravidae. 63% were post-term. 77% underwent IOL with prostaglandins, 23% were induced by amniotomy and intravenous syntocinon. 50% had epidural anaesthesia of which 55% were sited outside "normal" working hours. 72% of patients had a normal vaginal delivery, 8% an instrumental vaginal delivery and 20% underwent emergency Caesarean Section. 76% of all deliveries and 77% of operative deliveries occurred outside "normal" working hours. The majority of patients undergoing amniotomy/intravenous syntocinon had an IOL-to-delivery interval of 8 hours whereas IOL with vaginal prostaglandins had a longer IOL-todelivery interval, the majority occurring within 8-16 hours.

CONCLUSIONS

The majority of patients undergoing IOL delivered outside "normal" working hours increasing the workload for emergency on-call obstetric, anaesthetic and midwifery staff. It was recommended that the IOL policy be change to commence prostaglandin induction at 22.00 hours rather than 08.00 hours to reduce the number of deliveries and therefore the clinical workload occurring outside "normal" working hours, and that a further study be carried out to assess the effect of such a change in policy.

HEALTH-RELATED QUALITY OF LIFE FOLLOWING UTERINE ARTERY EMBOLISATION

Khaund A, Moss J, Lumsden M A
North Glasgow University Hospitals, UK.

AIM

Uterine artery embolisation (UAE) is a treatment for symptomatic uterine fibroids. Observational

studies suggest that it is effective in controlling fibroid-associated symptoms in 80-94% of women. We used the previously validated SF36 questionnaire to assess health status in a group of women with an established diagnosis of symptomatic fibroids prior to and up to 36 months following UAE.

METHODS

The SF36 comprises 36 questions assessing 8 dimensions of health encompassing physical, social and emotional status. Forty-seven women undergoing UAE completed the SF36 questionnaire before treatment. Follow-up has been completed by 35, 25, 18 and 13 women at 3, 6, 12 and 24-36 months respectively.

RESULTS

Pre-treatment SF36 scores in all dimensions were lower than the established scores for the normal population, indicating the disease burden of fibroids. At 3 months post-embolisation, the mean scores for all dimensions of health were higher than pre-treatment scores; these increases were statistically significant in all but two of the dimensions being assessed (paired t-test; $P<0.05$). At 6 months, the scores were significantly higher in 4 out of 8 dimensions. At 12 and 24-36 months, scores increased non-significantly in all but one dimension of health.

CONCLUSION

Health as assessed by the SF36 questionnaire is significantly improved at 3 and 6 months after UAE. This improvement appears to be maintained up to 36 months following treatment. Further long-term data is being collected.

AN AUDIT ON TRENDS OF VAGINAL DELIVERY AFTER ONE PREVIOUS CAESAREAN SECTION

Singh T, Justin C W, Haloob R K

Department of Obstetrics and Gynaecology, Basildon Hospital, Essex, UK.

AIMS

The aim of this study was to look at the trends of delivery following one previous caesarean section and the main indications for repeat caesarean sections.

METHODS

A review of case notes of all patients who have had one caesarean section in the past was carried out over one year (January to December 2000). After exclusion a total of 197 cases were obtained.

RESULTS

Vaginal birth was achieved in 66 patients (33.5%). One hundred and one women (51.3%) had a trial of labour (TOL), which was successful in 66 women (65.3%). Caesarean section was the mode of delivery in 131 (66.5%). 45.1% had an elective caesarean and in 21.4% it was an emergency procedure.

CONCLUSIONS

In our study TOL was successful in 65.3% of women; however the overall vaginal birth rate was a dismal 33.5%. This is because a large number of women opted to have an elective repeat caesarean. Maternal request was the most common indication for a repeat caesarean section. The answer to the rising caesarean rates seems to lie in reducing the primary caesarean section rates, accurately diagnosing foetal compromise and in bringing about a change in the attitude of the general public towards vaginal birth after caesarean.

USE OF MICROWAVE ENDOMETRIAL ABLATION IN ENLARGED AND PATHOLOGICAL UTERI IN SYMPTOMATIC CONTROL OF MENORRHAGIA & DYSMENORRHOEA

Jadhav J, Patta U, Irani S

Birmingham Heartlands and Solihull Hospitals NHS Trust UK.

AIM

To evaluate the success rate of microwave endometrial ablation (MEA™, Microsulis Group.) in women with menorrhagia & dysmenorrhoea due to enlarged and pathological uteri.

METHODS

Cohort studies have shown 66% and 70% improvement in menorrhagia and dysmenorrhoea respectively and 91% patient satisfaction. MEA results are comparable to TCRE. However, there are no studies performed to assess the outcome in uterine cavity measuring larger than 80mm.

We have so far performed this procedure on 27 women with larger uterine cavity. Few had abnormalities like intramural or sub-mucosal leiomyoma's and sub-mucosal polyp's. Symptom control and patient satisfaction was assessed from the replied postal questionnaire.

RESULTS

The mean age was 43.62 years. Mean cavity length was 99.34 mm (81mm-140 mm). The questionnaire was replied at mean interval of 7.6 months post treatment. 96% had improvement in their menses. Of these 81% had developed amenorrhoea or light menses. Dysmenorrhoea was better in 70% of cases. Overall satisfaction was 78%.

CONCLUSIONS

We have demonstrated cure rate for menorrhagia and dysmenorrhoea in larger and abnormal uteri which are comparable to with near normal sized uteri. These results of our unique study should give us greater confidence in offering this treatment to such women in future.

REPEAT ABORTIONS: WHO OR WHAT TO BLAME?

Wong S S M, and Gbolade B A

Fertility Control Unit, St. James's University Hospital, Leeds.

AIM

To ascertain the proportion of repeat to total abortions during a six-month period in 2002 and the women's contraceptive usage profile.

METHOD

Audit of case notes of women requesting abortion.

RESULTS

During the 6 months, 1,042 women attended the fertility control unit, 740 (71%) were index and 302 (29%) were repeat abortions. The mean age was 25 years. Fewer women in the repeat group reported no contraceptive usage (index vs. repeat; 33% vs. 27%; P=0.05) at conception. More women in the repeat group were using contraceptive pill (index vs. repeat; 34% vs. 43%; P=0.02), but no significant difference was found in usage of long term contraceptive method between groups (index vs. repeat; 3% vs. 4%). After counselling, fewer women in the repeat group remained undecided on their future contraception (index vs. repeat; 19% vs. 12%; P=0.01). For those who have decided, women in the repeat group were less likely to choose contraceptive pill (index vs. repeat; 41% vs. 24%; P< 0.001) but more likely to choose a long term contraceptive method (index vs. repeat; 55% vs. 74%; P<0.001).

CONCLUSION

The proportion of repeat abortions was very high. Despite women having repeat abortion appeared to be more willing to choose a form of long term contraception, it is surprising to find an unusual proportion (12%) of women in this group remain undecided about their future method on contraception.

PHYTOESTROGENS REDUCE SPERM MOTILITY IN VIVO *AND* IN VITRO

Anderson L,[1] McClure N,[1] Morton M,[2] Lewis S E M [1]

School of Medicine, Dept of Obstetrics & Gynaecology, Queens University Belfast, Grosvenor Road, Belfast BT12 6BJ.[1] Willowbrook Labs, St Mellons Cardiff CF3 0EF, UK.[2]

AIM

To determine the levels of the two commonly occurring dietary phytoestrogens: genistein and daidzein in human seminal fluid and to establish if they influence sperm motility *in vivo* or *in vitro.*

METHODS

Semen from 24 patients attending the Regional Fertility Centre was prepared and motility analysed by CASA using a Hamilton Thorne (IVOS) system. Phytoestrogen levels in the seminal plasma were measured by gas chromatography mass spectrometry. Sperm from 14 patients were incubated with genistein or daidzein (10 μM and 100 μM). Motility was assessed after 5, 60 and 120 minutes.

RESULTS

Genistein levels in seminal plasma ranged from 0.5 to 10.5 pmol/mL and daidzein from 9-78 pmol/mL. There was an inverse correlation between genistein concentration and % motility (r =0.46; p<0.05). Sperm exposed to genistein *invitro* (100 μM) showed a greater and more immediate decrease in the number of progressively motile sperm, 20% compared to 9% with daidzein (p<0.001). Both straight line and curvilinear velocity parameters were reduced

significantly by both phytoestrogens at 100 μM but not at 10 μM.

CONCLUSIONS

Both phytoestrogens are present in semen. Genistein has a detrimental effect on the numbers of motile sperm *in vivo*. Exposure confirms a dose and time dependent decrease in both numbers and velocity of sperm *in vitro*, with genistein being more damaging.

OBSTETRIC MANAGEMENT OF JEHOVAH'S WITNESSES AT A CENTRAL LONDON TEACHING HOSPITAL

Agbaje I, Harding K, Butros A

Guy's and St Thomas' Hospital, London, UK.

AIM

To review the obstetric management of Jehovah's witnesses.

METHODS

A retrospective study of the antenatal, intrapartum and postnatal care of patients identified as Jehovah's Witnesses delivering after 24 weeks at Guy's and St Thomas' Hospital. Fifty-five such patients were identified between April 1999 and January 2001. Case-notes were reviewed against a set proforma.

RESULTS

Thirty case notes were reviewed. Religion was clearly recorded on 97% of the notes. At booking 53% of women were not referred to a consultant. Only 50% of patients were seen ante-natally by a medical team, 25% by a consultant. Only 27% of patients had no identified risk factors for haemorrhage and risk factors when present were often multiple. There was no documented counselling regarding risks of refusing blood products in 37% of patients and only 37% had a signed advance directive in the notes. A consultant performed 75% of elective caesareans and a junior registrar performed 83% of emergency caesareans. Postnatally only 30% of patients had a haemoglobin checked prior to discharge.

CONCLUSION

Care for this group of patients falls short of agreed standards. The very nature of obstetrics means haemorrhage is often severe, rapid and occasionally life threatening. Management of these patients requires vigilance, identification of risk factors and clear documentation. This is easy to initiate and indefensible medico legally if a major event occurs.

THE VALUE OF ROUTINE ULTRASOUND FOR PREGNANCY TERMINATION REQUESTS

McGalliard C, Gaudoin M

Department of Obstetrics and Gynaecology, Royal Alexandra Hospital, Paisley, Scotland, UK.

AIMS

Determination of gestational age from menstrual dates can be inaccurate. Ultrasound provides a safe and effective means for calculating gestation.

The aim of this study was to determine the correlation between gestational age based on menstrual dates and ultrasound scan in women requesting pregnancy termination. Further, we calculated the proportion of cases where first trimester medical termination may have been offered.

MATERIALS AND METHODS

This prospective observational study was performed in the Social Gynaecology clinic of a district general hospital. All 283 patients seen between November 2001 and June 2002 underwent transvaginal scan to calculate gestational age.

RESULTS

262 women (93%) had ongoing pregnancies. 237 women were certain of the date of their last menstrual period, but there was a discrepancy of more than one week in gestational age in 37%. Based on their menstrual dates, 125 women might have been offered first trimester medical termination, but this rose to 173 if gestation was based on ultrasound assessment.

CONCLUSIONS

Calculation of gestation age based upon menstrual dates was not accurate. Ultrasound is more accurate, identified nonviable pregnancies and could increase the proportion of first trimester medical termination being offered. We believe that ultrasound scanning should be performed routinely for all patients requesting pregnancy termination.

UPTAKE AND RESULT OF ANTENATAL HIV SCREENING IN LEEDS, UNITED KINGDOM

Oboh A E, Perry A, Campbell D J

St James's University Hospital Leeds, UK.

AIM

1. To ascertain the uptake of HIV screening by pregnant women in Leeds.
2. To determine the prevalence of HIV infection in pregnant women in Leeds.

METHOD

The database for pregnant women attending the Leeds NHS trust (St James University Hospital and Leeds General infirmary) for antenatal care from December 2000 to December 2002 was reviewed. This was analysed for the degree of uptake of screening and the prevalence HIV.

RESULT

In 2001, the uptake range of HIV screening test by pregnant women in Leeds was 70%-83% and there were four positive results. The prevalence of HIV in pregnant women was 1 in 2580. In 2002, the range of uptake was 81%-91% and there were nine positive results. The prevalence of HIV in pregnant women had increased to 1 in 946, a 36% increase in the prevalence from 2001. Seventy-five percent of the HIV positive cases were from the African subcontinent.

CONCLUSION

The introduction of antenatal HIV screening is acceptable to women and the prevalence of HIV in pregnancy is steadily increasing in regions outside London area such as Leeds. It is pertinent that all regions in the United Kingdom vigorously pursue this programme of screening in order to ensure early diagnosis, treatment and prevention of transmission of HIV infection.

PREVALENCE OF FACTOR V LEIDEN (FVL) AND PROTHROMBIN G20210A MUTATION IN OVER 1100 UNSELECTED PREGNANT POPULATION USING A NOVEL POLYMERASE CHAIN REACTION/RESTRICTION FRAGMENT LENGTH POLYMORPHISM (PCR/RFLP) TECHNIQUE.

Maiti S, Welbourne J, Welch C R

Arrowe Park Hospital, Merseyside, UK.

AIM

The published data on prevalence FVL and Prothrombin gene mutation in general population in UK is based on biased small studies. This study is to determine the prevalence in an unselected pregnant population using a new multiplex reaction that will allow simultaneous detection without false positive results.

METHODS

PCR products were obtained from DNA extracted from venous blood by Proteinase K method using mutagenic primer-based PCR/RFLP system. This eliminates the false positive results caused by mutations adjacent to restriction endoclease(RE) recognition sites. Following overnight digestion of PCR product by RE, mutation was detected by Polyacrilamide gel vertical electrophoresis.

RESULTS

1165 pregnant women were recruited for the study. Heterozygous FVL and Prothrombin G20210A have been found in 35(3.01%) and 29(2.5%) women respectively. All carriers of these mutations were heterozygous. None had both the mutations. 2324 alleles were analysed using Proteinase K extracted DNA with PCR failure rate of 4.65%. All failed analyses were successfully amplified following re-extraction of DNA.

CONCLUSION

Prevalence of Prothrombin mutation considerably higher compared to published figures of 1.6%. FVL in predominantly Caucasian population in UK is less common than often quoted prevalence in rest of Europe and North America. The primer engineered multiplex reaction is useful in routine diagnostic settings saving resources with a low failure rate.

GENITAL CHLAMYDIA TRACHOMATIS INFECTION: INCIDENCE, RE-INFECTION RATES AND CHARECTERISTICS OF A GENITO-URINARY POPULATION

Dinardo L R B, Gupta M, Heisdown A-M, Hopwood J, Ghosh A K.

Wirral NHS Trust, Genito-Urinary Medicine Department, Arrowe Park Hospital, Upton. Wirral, Merseyside, UK.

BACKGROUND

Chlamydia trachomatis is the commonest bacterial sexually transmitted infection in the UK

and associated with long-term morbidity. Evidence suggests that opportunistic screening of young women in high chiamydia prevalent areas has limited impact on reducing prevalence possibly due to high re-infection rates.

AIMS

To determine the incidence, re-infection rate and risk factors associated with *C.trachomatis* infection in Genito-Urinary Medicine (GUM).

METHODS

We recruited sexually active women aged 16-24 years over a twelve-month period from March 2002. Urine samples were tested for chlamydia by ligase chain reaction. Positive women received single dose *azithromycin* and advised a test of cure after four weeks, followed by a recall at 6 monthly intervals. Sexual partners were contacted for screening and treatment.

RESULTS

The ongoing study has recruited 285 patients of whom 65 were positive, a prevalence of 22.8%. To date the incidence is 5% and re-infection rate is 9.5%.

Signs and symptoms were identified in 45 positively tested women, 27 were co-infected with *Bacterial vaginosis*, 1 with *Neisseria gonorrhoeae* and 9 with Human Papillomavirus. Partners attended in 44% (28/64) of cases, 86% positivity. No contraception was used in 20% of cases, 57% the oral contraceptive pill and supplementation with barrier methods occurred infrequently.

CONCLUSIONS

Initial results show high prevalence, incidence and re-infection of *C.trachomatis* suggesting the need for screening of high-risk women at regular intervals. Our study reflects changing sexual behaviour and infrequent use of non-barrier contraception despite awareness of chlamydia, showing that contraceptive requirements need to be addressed.

A PROSPECTIVE OBSERVATIONAL POPULATION STUDY INTO NEAR-MISS MATERNAL MORBIDITY IN SCOTLAND

Brace V, Hall M, Penney G

Aberdeen Maternity Hospital, Aberdeen, UK.

AIM

To quantify the incidence of near-miss maternal morbidity in Scotland and determine the feasibility of doing so.

METHODS

Defined categories for 13 near-miss events were developed from previously published work in this field. All 22 consultant-led maternity units in Scotland participated in data collection between October 2001 and September 2002 inclusive. Each month, every unit reported any cases, category of incident and date. Data were collated centrally and analysed to determine the frequency of near-miss incidents. The number of maternal deaths was obtained from the Confidential Enquiry into Maternal Deaths.

RESULTS

Near-miss events were reported in 196 patients, out of 50,751 deliveries in Scotland. The rate of reporting was 3.8 patients per 1,000 deliveries. Thirty percent of cases had more than one near-miss diagnosis. Major obstetric haemorrhage accounted for 50% of cases. Only a third of near-miss patients were admitted to intensive care units. The incidences of each category of near-miss event were similar to those published elsewhere. Four relevant maternal deaths occurred during the study.

CONCLUSION

Categories of severe maternal morbidity can be defined and should be measured now that maternal mortality is decreasing in developed countries. It is possible to set up a reporting system for morbidity, as well as mortality, on a national level.

CERVICAL CERCIAGE – A FIVE YEAR REVIEW IN A UNIVERSITY HOSPITAL

Arunakumari P S, Warren R

Norfolk and Norwich University Hospital, UK.

OBJECTIVE

To review the experience with cervical encerclage procedures in a university teaching hospital by evaluating the perinatal and maternal outcome following cervical encerclage procedures.

BACKGROUND

The cervical status at the time of the cerclage is likely to influence the chances of successful

outcome. Our study categorises the cases of cervical cerclage as elective, emergency and rescue procedures based on progressively worsening cervical dilation.

DESIGN

A five year retrospective review of patients' records.

METHODS

A total of 22 procedures were further classified as 1) elective if the cervical dilatation at the time of cerclage was ≤3cms, 2) emergency with a cervical dilatation of 4-8cms and 3) rescue procedure at >8cms.

RESULTS

Outcome	*All cerclages(%)*	*Elective cerclages(%)*	*Emergency cerclages(%)*	*Rescue cerclages(%)*
Total procedures	22	15	4	3
Total number of fetuses	26	15	6	5
Livebirths	20(77)	14(93)	4(67)	2(40)
Perinatal deaths	6(23)	1(7)	2(33)	3(60)
Term delivery	14(64)	14(93)	0(0)	0(0)
Preterm delivery	8(36)	1(7)	4(100)	3(100)
No postpartum complications	18(82)	15(100)	2(50)	1(33)
Postpartum complications	4(18)	0(0)	2(50)	2(66)

CONCLUSIONS

We conclude that cervical cerclage is a safe and efficacious technique in highly selected highrisk patients. The results of our study suggest that cervical cerclage is best performed as a planned elective procedure.The perinatal benefit is less pronounced but still maintained in emergency procedures. Furthermore, even in desperate circumslances,rescue procedures may well be beneficial.

ANALYSIS OF REACTIVE ANTEPARTUM CARDIOTOCOGRAPHS AT TERM USING FRACTAL GEOMETRY – ASSOCIATIONS WITH FETAL WELL-BEING

Anastassopoulos P,[1] Mires G,[1] Abel E [2]

[1] Department of Obstetrics and Gynaecology, Tayside University Hospitals & [2] Department of Bioengineering, University of Dundee, Dundee, UK.

AIM

This study applied principles of non-linear dynamics and fractal geometry in the analysis of CTGs, improving extraction of information for the assessment of fetal well-being.

METHODS

45 pregnancies, 38-40 weeks gestation, were assessed by 40 minutes of CTG (abdominal probe of Corometrics 151 monitor), in the same morning of delivery. The management plan was for elective lower uterine segment Caesarean Section (repeat-maternal request). Second trimester scan was unremarkable.

The CTGs were digitized by a high-resolution scanner (Hewlett Packard Scanjet 5400C™, resolution 2400x2400 dpi). The signal was numerically extracted using the DigiGraph 5.1 software and the technique of Detrended Fluctuation Analysis (DFA).

RESULTS

All CTGs were reactive (FIGO criteria), with average baseline heart rate 138 bpm (C.I. 130-146 bpm). All babies were delivered with Apgar scores of $>7^{1}$, $>=8^{5}$ and delivery cord blood pH greater than 7.30 (average 7.34, CI 7.32-7.36).

The average scaling coefficient from the DFA was 0.96 (C.I. 0.92-1.01) and the fractal dimension 1.46 (C.I. 1.38-1.51). The result was strongly suggestive of a CTG being a fractal signal.

CONCLUSION

Not only intrapartum, but also normal antepartum CTGs can reveal significant complexity. This consists an intrinsic feature of the fetal heart. This pilot study provides evidence that the heart rate fluctuations may be preferably approached by principles of non-linear dynamics.

RETROSPECTIVE STUDY OF OVARIAN CLEAR CELL CARCINOMA AT BELFAST CITY HOSPITAL BETWEEN JANUARY 1995 AND JUNE 2002

Low Y S, McClelland R, McNeill S

Belfast City Hospital, UK.

AIMS

To evaluate the incidence, clinical presentation, treatment and outcome of ovarian clear cell carcinoma (OCCC).

METHODS

Data collection from patients' medical notes and BCH tumour registry.

RESULTS

There were 21 OCCC cases. The median age was 61 years old (range 32-76 years). Tumours were 71.43%(15/21) stage I, 9.52%(2/21) stage II, 14.29%(3/21) stage III and 4.76%(1/21) stage IV. All the patients presented with pelvic mass ranging in size from 3x4 to 25x30cm and everyone had surgical cytoreduction. Fifteen patients received postoperative platinum-based chemotherapy, 47.62%(10/21) in combination with paclitaxel. One patient with ovarian non-Hodgkin lymphoma received CHOP. Two patients with concurrent endometrial clear cell carcinoma received adjuvant chemoradiotherapy. Six patients received no postoperative chemotherapy. Only 14.28%(3/21) had recurrence of whom two were stage Ic and one stage IIIa patient. Median time to recurrence was 4 months (range 2-6 months) for stage Ic and 9 months for stage IIIa patients. With median follow-up of 26 months (range 1-78 months), 86.67%(13/15) stage I patients are alive, of which 7.69%(1/13) with disease, while 33.3%(1/3) stage III patients are alive. Median survival for stage III patients was 2 months (range 1-11 months). One stage IV patient is still alive (78 months).

CONCLUSION

It is difficult to comment on the actual natural incidence of OCCC. There is an increase cases of OCCC but the rise is attributed to greater awareness and coding it correctly. We see more of early stage OCCC patients and our outcome is much better. The outcome of later stage OCCC remains poor.

HRT - ONE RISK FACTOR AMONG MANY?

Currie A, Adams B, Mc Manus J

HRT Clinic, Royal Maternity Hospital, Belfast, UK.

INTRODUCTION

Recent publication of the prematurely terminated arm of the Women's Health Initiative trial has highlighted increased risks of cardiovascular disease in users of combined HRT. Much discussion of the results has centred around the mean age of recruitment and the possibility these women had underlying increased susceptibility to cardiovascular complications.

AIMS AND OBJECTIVES

In a specialist menopause clinic with 2,500 annual attendances, we sought to establish the proportion of patients who had risk factors for cardiovascular disease independent of HRT. Informed consent was obtained to measure

- Age
- Body mass index (BMI)
- Family history of cardiovascular disease
- History of hypertension
- History of smoking
- Fasting lipid profile
- Plasma lipoprotein(a) level
- Fasting glucose
- Plasma homocysteine

75 patients were recruited and completed the study. 46 attended for serum screening tests.

RESULTS

Patient age	range	39 - 76
	mean	54 years
Family history of IHD		63%
BMI >30		37%
Lipoprotein A>30		33%
Known hypertension		21%
Elevated cholesterol(>6.0mmol/l		30%
Elevated LDL cholesterol		3%
Family history of stroke		30%
Elevated triglycerides		25%
Cigarette smokers		21%

CONCLUSIONS

This study has highlighted the prevalence of modifiable and genetic risk factors for the development of cardiovascular disease in a sample of women using postmenopausal HRT. We suggest that all patients attending specialist menopause clinics would benefit from similar screening and advice in light of the WHO findings.

AN AUDIT OF EXTERNAL CEPHALIC VERSION

Mohanly A, Madhavan D, Agboola N

Kent & Canterbury Hospital, UK.

INTRODUCTION

All women with an uncomplicated breech pregnancy at term should be offered external cephalic version (RCOG). However, clinical experience suggests that ECV is currently not offered as widely as advised [1] and only half of women with an uncomplicated breech presentation at term agreed to have an ECV.[2]

AIM

To access, our practice of ECV at Kent & Canterbury Hospital.

METHODS

Between January 2002 and December 2002, 70 women presented with breech presentation at around 36 weeks gestation. The case notes of these patients were reviewed retrospectively. Fifteen patients were interviewed, on third post operative day, about the counselling they received.

RESULT

Fifty-three out of these 70 patients were suitable for ECV and forty five (85%) were offered the facility at 37 weeks. Midwives/registrars/ consultants discussed ECV with them at 34-36 weeks in the community/hospital antenatal clinic and information was given verbally. Fifty-four percent of primis and 60% of parous ladies accepted ECV. Excluding complete breech presentation 13% of primis and 30% of multies had a successful ECV. ECV was unsuccessful in either group with complete breech presentation.

This study showed amongst others that, 15% of patients, who were suitable, were not offered ECV. Again, 46% of primis and 40% of parous women declined ECV. This is a significant figure in agreement with other studies.

Majority of the patients interviewed, opined that, information given to them by various professionals were not consistent and they were not convinced enough to take up the offer.

CONCLUSION

We concluded that a well designed information leaflet would improve our current counselling and probably improve the uptake. The information leaflet should be available to the patient before counselling. A larger study should be performed, with more patient's involvement, to look into other aspects of external cephalic version.

DOES OBSTETRIC INTERVENTION INFLUENCE ADMISSION TO A NEONATAL INTENSIVE CARE UNIT IN A TERTIARY CENTRE?

Steele E K, McMaster A, Omer I, McConkey M, Tubman R, Tharmaratnam S, McClure B G

Departments of Obstetrics, Gynaecology and Neonatology, Royal Jubilee Maternity Service, Grosvenor Road, Belfast, UK.

INTRODUCTION

Prematurity and congenital anomaly are the commonest indications for admission to neonatal intensive care units (NICU). However, preterm social induction of labour or elective caesarean section are often blamed for further burdening the service.

AIMS

To determine whether admission to NICU can be avoided.

METHOD

From October to November 2001 all babies admitted to NICU were included. A proforma was completed from the maternal casenotes.

RESULTS

45 singletons, 7 twins and 1 triplets were admitted. The mean gestation at delivery was 34+0 weeks. The main indications for admission were prematurity, congenital anomaly, transient tachypnoea of the newborn and preterm rupture of membranes. Only 16% of mothers had labour induced and the decisions were taken by senior staff for valid clinical reasons. Indications for delivery included antepartum haemorrhage, severe pre-eclampsia and suspected fetal compromise. Caesarean section was performed in 66% by either a registrar or consultant in the

majority of cases. Six of the admitted babies had low 5 minute Apgar scores.

DISCUSSION

Only 3 admissions (6.8%) could have been avoided by alternative obstetric management. Most preterm deliveries were due to spontaneous labours.

CONCLUSIONS

Women whose babies were admitted to NICU were usually delivered for valid reasons and these decisions were taken by the most senior staff.

THE BELFAST PARADOX

Mahsud S, McKenna D, Tharma S, Dornan J

Royal Jubilee Maternity Services, Belfast, UK.

AIM

The aim of study was to determine if alcohol consumption in first trimester protects against development of pre-eclampsia in late pregnancy.

METHODS

Three thousand eight hundred and five patients were observed prospectively and a questionnaire at booking visit evaluated the total alcohol consumption. History of PIH in this and previous pregnancy was excluded. Pre-eclampsia was defined as BP >140/90mmg and >+1 proteinuria in absence of other causes.

RESULTS

543 (14.3%) mothers consumed moderate amount of alcohol and 3,262 (85.7%) were abstemious. Only 2 patients, out of 543, consuming alcohol had pre-eclampsia as compared to 71, out of 3,262, in non alcohol users (P=0.002). There was no difference in preterm delivery rates and IUFGR.However there was significant protection against development of pre-eclampsia in mothers who consumed alcohol(P=0.002).

There was also significant protection of mothers who smoke. Alcohol consumption was associated with delivery of male fetuses (P=0.003).

CONCLUSION

14.3% of our population drink alcohol in pregnancy. The French Paradox has shown a low rate of CHD despite a high saturated fat intake and this has been attributed by the researchers to high alcohol consumption by the French population. The Belfast paradox is that alcohol consumption with or without smoking in low risk population appears to protect mothers from developing pre-eclampsia.

A COMPARISON OF COMPLIANCE WITH 'NHSCSP STANDARDS AND QUALITY IN COLPOSCOPY' IN A REGIONAL CENTRE AND A DISTRICT GENERAL HOSPITAL.

Hardy C, Steele K

Ulster Hospital, Belfast, UK.

INTRODUCTION

The 1996 document NHSCSP Standards and Quality in Colposcopy "sets out guidelines to ensure that women followed up by referral for

Standard	*RC*	*DGH*	*NI*
>90% referrals should be seen < 8 weeks	91%	20%	54%
>90% CINII-III should be seen <4 weeks	100%	6%	34%
Referral after 3 borderline smears	80%	45%	
Referral after 2 mildly dyskaryotic smears	36%	66%	
>90% should document the visibility of SCJ	49%	89%	23%
>90% should document presence/absence of a lesion	81%	81%	73%
>90% should document colposcopic impression	56%	81%	73%
>90%with CIN II-III should have a biopsy	100%	87%	93%
Were >90% biopsies adequate?	93%	100%	97%
Did >85% biopsies show CJN?	44%	51%	66%

colposcopy receive a high quality service".

OBJECTIVE

To assess how the current delivery of colposcopy services in a Regional Centre (RC) and a District General Hospital (DGH) compared with 1996 NHSCSP Standards and to highlight where the deficiencies exist so that improvements can be made.

METHOD

Charts of 51 new referrals for colposcopy to the RC (October - December 2001) and 59 new referrals to the DGH (February 2002 - February 2003) were included.

A standard proforma was designed and completed for each patient detailing information on waiting times, documentation and biopsy practice.

RESULTS

Results for both centres are shown below along with Regional Audit figures for Northern Ireland (1999) for comparison.

DISCUSSION/CONCLUSION

DGH waiting times were prolonged and although appointments were allocated appropriately, the caseload seemed overwhelming with an inappropriate referral rate of 30% suspected. An additional clinic has recently started and improvement is to be expected.

Documentation would be improved within RC by encouraging all staff to complete the standard proforma currently in use (a visiting colposcopist doesn't use it).

With these exceptions, the results for the two centres compare favourably with the Standard and with the Regional Audit figures.