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PROMOTING MATERNAL, FETAL & NEONATAL WELL-BEING

PSM BULLETIN

MARCH 2018

Message from The President

Dear colleagues and friends,

This year marked the 25th Anniversary of the Perinatal Society of Malaysia. Over the years we have seen how PSM has grown consistent with the aspirations of PSM founders, especially the late YH Dato' Dr. Lim Nyok Ling. All the successes and achievement were tributes to the high patronage of The Yang Teramat Mulia Raja Dato' Seri Eleena, the excellent and dedicated worked of all the Past Presidents and their council members and committees. The PSM planned programmes and activities will not achieve its aims without the endless support of all PSM members.

The pioneering works have helped to establish the Malaysian Neonatal Registry (MNNR) and the Neonatal Resuscitation Programme (NRP); developed guidelines on promoting maternal, fetal and neonatal well-being and had provided expert advices to government pertaining to perinatology.

As our appreciations for the past presidents and founding members, we have planned a special congress dinner, "OSCAR Elegance" to be held on the 7th April 2018 at Royale Chulan Kuala Lumpur. Our Royal Patron and Past Presidents will be present to meet all of us at the dinner. Please grab this opportunity to meet those who have orchestrated the growth of PSM.

With the theme of "Prevent, Detect and Treat: Ensuring Quality Care in Perinatal Medicine", we bring you list of well-known speakers and researchers from our neighbouring regions and abroad. We are certain that the Congress will bring impacts to the quality of your challenging day-to-day clinical jobs. The Scientific programmes of the 25th Regional Congress of the PSM and the PSM Workshops ("CTG Masterclass" and "The Neonatal Lungs") were arranged to benefit all levels of PSM Members who are providing health care for the mother and neonates.

In conjunction to the World Premature Day, series of events were held including the "Super Preemies Run" followed by a very successful KLINC with the theme of "Neonatology Thinking Hats: Ethics, Evidence & Controversies". All these credits go to the dedicated committee members and a salute to "the neonatologist with multi hats", Dr. Azanna, PSM Immediate Past President.

This year the PSM office had moved together with the Academy of Medicine to the new office in the Technology Park Malaysia, Bukit Jalil, Kuala Lumpur. We are still looking for the most suitable, affordable, easily accessible place for a permanent office.

Thank you to all 2017/2018 council members for helping me out to make this year another successful year for PSM, and thank you to all members for your endless support to the society.

Dato' Dr Hamizah Ismail
President of the Perinatal Society of Malaysia 2017/18

EDITOR
Dr. Yip Khar Weng

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PSM 2017/2018 COUNCIL MEMBERS	
President	Dato' Dr Hamizah Ismail
President Elect	Datuk Dr Soo Thian Lian
Immediate Past President	Dr Azanna Ahmad Kamar
Secretary	Dr Chong Hon Loon
Assistant Secretary	Dr Yip Khar Weng
Treasurer	Dr Michelle Ling Min-Min
Council Members	Prof Dr Imelda Balchin SN Sangeeta Rathansamy Matron Valarmathi A/P Kovindarajoo
Coopted Council Members	Dr Chee Seok Chiong
	Dr See Kwee Ching
	Dr TP Baskaran

REPORT OF 24TH REGIONAL CONGRESS OF THE PERINATAL SOCIETY OF MALAYSIA

(Dr. Matthew Chong Hon Loon)

The 24th Regional Congress of Perinatal Society of Malaysia was the most important event for 2016/17. Great effort from council members to meet together and made this event successful. It was held in The Equatorial Hotel, Penang on 23rd-26th March 2017, which had successfully attracted speakers and participants from Philippines, Indonesia, Singapore and Australia.

The congress was officiated by Dato' Dr. Sukumar Mahesan, Director of the Penang Health Department, and was graced by our beloved Patron, HRH Raja Dato' Seri Eleena binti Almarhum Sultan Azlan Muhibuddin Shah Al-Maghfur-lah.

HRH Raja Dato' Seri Elena, Dato' Dr Sukumar and the PSM organizing committee members

The congress theme was "Innovation and Changes in Perinatal Medicine: Yesterday, Today and Tomorrow". We used butterfly's life cycle as our opening ceremony theme. The video montage showed life cycle of a butterfly and followed by the kids' dances.

Opening ceremony

Welcoming Speech by Dr Azanna, PSM President 2016/2017

Token of appreciation to Dato' Dr Sukumar for officiating the 24th Regional Congress of PSM

There were two winners for the Best Neonate Oral Free Paper presentation- Dr. Jasminder Kaur A/P Amarjit Singh and Ng Chin Ang. The winner for Best Obstetric Oral Free Paper presentation was Dr. Sheng Kun Leng and the winner for Best Poster presentation was Dr Gan Eu Ann.

We received an overwhelming support from various exhibitors. The speakers and participants obviously enjoyed the congress as well as the gala night. The participants from Philippines did a great performance on stage.

Performance by delegates from Phillipines during the Gala Night

Booth visits by HRH Dato' Seri Elena after the opening ceremony

PRESIDENTS OF THE PERINATAL SOCIETY OF MALAYSIA

NO	YEAR	NAME
1	1994/95	Emeritus Professor Dr Nem-Yun Boo
2	1995/96	Dr Gunasegaran PT Rajan
3	1996/97	Late Dato' Dr Lim Nyok Ling
4	1997/98	Dr Gunasegaran PT Rajan
5	1998/99	Datuk Dr Musa Mohd. Nordin
6	1999/2000	Dr Ravi Chandran M.
7	2000/01	Late Dato' Dr Lim Nyok Ling
8	2001/02	Prof Dr Jamiyah Hassan
9	2002/03	Prof Dr Lim Chin Theam
10	2003/04	Dr Japaraj Robert Peter
11	2004/05	Dr Irene Cheah Guat Sim
12	2005/06	Associate Prof. Dr Kalavathy Subramaniam
13	2006/07	Late Dato' Dr Lim Nyok Ling
14	2007/08	Dr J. Ravichandran
15	2008/09	Dr Irene Cheah Guat Sim
16	2009/10	Dr TP Baskaran
17	2010/11	Dr Alvin Chang
18	2011/12	Dr Rosy Jawan
19	2012/13	Datuk Dr Soo Thian Lian
20	2013/14	Dato' Dr Bavanandam Naidu
21	2014/15	Dr See Kwee Ching
22	2015/16	Dr Sharmini Diana Parampalam
23	2016/17	Dr Azanna Ahmad Kamar
24	2017/18	Dato' Dr Hamizah Ismail

SEMINAR IN PERINATAL NEUROIMAGING

(DR NEOH SIEW HONG, ASSOCIATE PROFESSOR SHAREENA ISHAK)

The Perinatal Society of Malaysia in partnership with the Faculty of Medicine, University Kebangsaan Malaysia, organized the Seminar In Perinatal Neuroimaging on 25th September 2017. The seminar which was held at the Faculty of Medicine, UiTM Selayang Campus received a very good response with 110 clinicians participating in it. Professor Patricia Ellen Grant from Boston Children's Hospital was the main speaker of the seminar. Professor Grant is a world renowned expert in perinatal neuroimaging and a great teacher. The other members of the faculty were local experts in paediatric neurology, neurosurgery, paediatric radiology and maternal-fetal medicine. The seminar was organized with the aims to improve clinicians' understanding of cerebral injuries and developmental disorders in the fetus and neonate and to assist in refining their management.

Magnetic resonance imaging (MRI) has become increasingly available to clinicians for the evaluation of the fetus and neonate. Nevertheless, radiologists and clinicians often find the interpretation of fetal and neonatal brain MRI more challenging than that of the older patient groups. There is a wide anatomic variability with limited resolution. Abnormalities may be subtle and tissue contrast changes rapidly due to myelination, decrease in brain water and increase in tissue density with maturation.

The society hoped that the seminar could generate interest and promote research in the area of perinatal neuroimaging in Malaysia.


SEMINAR IN PERINATAL
IMAGING 2017
SEMINAR IN PERINATAL IMAGING
29 SEPTEMBER 2017


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29 SEPTEMBER 2017


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29 SEPTEMBER 2017

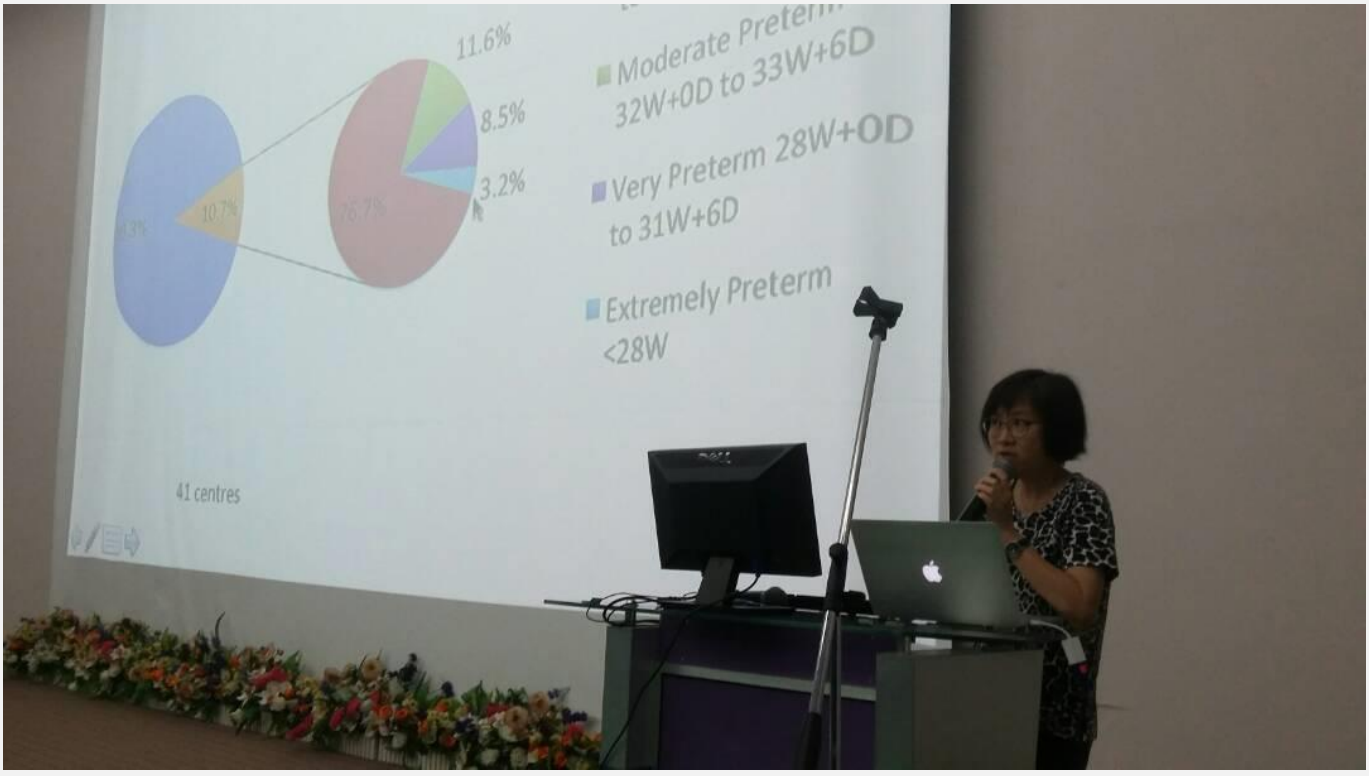
MALAYSIAN NATIONAL NEONATAL REGISTRY (MNNR) REPORT

(DR CHEE SEOK CHIONG)

The Malaysian National Neonatal Registry (MNNR) is into its 15th year with 44 source data producers (SDP) consisting of Ministry of Health (MOH) hospitals, university and private hospitals. Gleneagles Kuala Lumpur joined in as a source data producer in 2017. The first SDP meeting was held on 19th and 20th January 2017 in Selayang Hospital where findings from the 2015 data were presented with 134 participants in total attendance.

Our second SDP meeting was held on 7th and 8th December 2017 in Selayang Hospital. Findings from the 2016 data were presented during the meeting with 117 participants in total attendance.

The Registry receives an annual grant of RM 20,000 from Perinatal Society of Malaysia (PSM). The Ministry of Health (MOH) contributes to the website maintenance. Heartfelt thanks is recorded to the MNNR Steering Committee and Registry Staff that have contributed to the MNNR.



Presentation during the SDP meeting in Hospital Selayang

PREMATURITY AWARENESS CAMPAIGNS

2ND KUALA LUMPUR INTERNATIONAL NEONATOLOGY CONFERENCE 2017 & 1ST SUPERPREEMIES' RUN

(DR AZANNA AHMAD KAMAR)

The Perinatal Society of Malaysia had joined hands with the University of Malaya, and the College of Paediatrics, Academy of Medicine Malaysia in organising a Prematurity Awareness Campaign in November 2017. The campaign comprised of an international neonatology conference, a special SuperPreemies' Run, and a hashtag campaign.

Preceded by a 2-days lighting up occasion of the Kuala Lumpur Tower in glittering purple to commemorate World Prematurity Day on the 17th of November 2017, the SuperPreemies' Run was subsequently held on the 19th of November 2017 at the University of Malaya Arena (UM Arena) in honour and support of children who were born preterm. This charity run was officiated by YTM Raja Dato' Seri Eleena binti Almarhum Sultan Azlan Muhibbuddin Shah Al Maghfur-lah, the patron of Perinatal Society of Malaysia. Over four hundred participants attended event, including children who were born premature.

The Kuala Lumpur International Neonatology Conference (KLINC) was then held in the same week between the 22nd to 25th of November 2017, aimed to foster a nourishing exchange of experiences in newborn care between the health care providers with the theme of `Neonatology Thinking Hats : Ethics, Evidence & Controversies'. The scientific programme of KLINC 2017 had packaged up-to-date evidence with important ethical matters, reflecting the daily controversies experienced by neonatal intensive care clinicians. Over 350 delegates attended the event.

Plenary speakers included those who are top notch world-renowned speakers - John Lantos, Paediatric Bioethics professor and ethical advisor of the American Academy of Paediatrics; and Neena Modi, Neonatology Professor from Imperial College London and the president of the Royal College of Paediatrics & Child Health. Other leading experts included neonatal bioethicist Professor Brian Carter (USA), neonatologists Professor Ju Lee Oei (Australia), Professor Jeanie Cheong (Australia), Professor Koert de Waal (Australia), Professor Chang Yun Sil (South Korea), Dr John Smyth (Australia), Dr Anusha Arasu (UK), paediatric cardiothoracic surgeon Professor Zhang Haibo (China), as well as several more invited international and local speakers. Pre-conference events – the Neonatal Cardiac Ultrasound &

Haemodynamics Workshop, and a Perinatal Palliative Care Colloquium were also well received. The conference was officiated by the Minister of Health, YB Datuk Seri Dr S Subramaniam.

A hashtag campaign **#Hugs4Preemies** and **#IamPreemie** encouraging the public to share stories and photographs related to prematurity via twitter, instagram and facebook was also promoted during this period. Parents of premature infants in Malaysia were encouraged to share the story of their journey via the **SuperPreemies' Run** facebook page, on twitter as well as instagram. The organisation of these events had successfully enhanced the education of the region's healthcare providers, as well as in raising the public's awareness on and reducing the risk of having a premature baby, and the impacts of preterm birth.

KLINC 2017 was well received with attendance of over 350 delegates from all over the world. More than 75 were international delegates.

Committee of KLINC 2017 with speakers at Royale Chulan Hotel, Kuala Lumpur.



The SuperPreemies' Run held on the 19th of November 2017 at UM Arena had witnessed the participation of the public from all walks of life.

2017 NEONATAL RESUSCITATION PROGRAMME (NRP) ANNUAL REPORT

(DR SEE KWEE CHING, NRP CHAIRPERSON, PERINATAL SOCIETY OF MALAYSIA)

In 2017, a total of 6379 new and existing providers were trained in the 6th edition of the Neonatal Resuscitation Programme (NRP) while a further 526 providers were trained with the new 7th edition. The table below illustrates the number of new providers trained per state.

State	Version 6			Version 7		
	Doctors	Others	Total	Doctors	Others	Total
Johor	258	262	520			
Kedah	276	83	359			
Kelantan	193	427	620			
Melaka	184	52	236	33	76	109
Negeri Sembilan	270	57	327			
Pahang	96	36	132			
Penang	306	297	603	-	42	42
Perak	459	451	910			
Perlis	14	6	20			
Sabah	107	168	275	18	8	26
Sarawak	340	301	641	41	45	86
Selangor	614	331	806	51	50	101
Terengganu	234	299	533			
Wilayah Persekutuan, KL	159	114	273	93	69	162
Putra Jaya	81	43	124			

A total of 230 active instructors for the 6th Edition of the NRP are registered with PSM while another 44 lead instructors were trained during the last PSM Congress in Penang

The online system for the registration of NRP providers has been launched in mid-2016 to expedite the processing of NRP certificates for the providers. Most Ministry of Health hospitals has utilized this online registration and printing of NRP training certificates for their staff and house officers.

PREVENTION OF PRETERM LABOUR

Dr. Bavanandam Naidu, Senior Consultant in Maternal Fetal Medicine, Hospital Sultanah Bahiyah, Alor Setar

Preterm labour (PTL) is defined by the World Health Organization (WHO) as the onset of labour after the gestational age of viability and before 37 completed weeks or 257 days of pregnancy. It is clinically confirmed by demonstrable uterine contractions associated with documented cervical changes.

Threatened preterm labour is diagnosed when there are documented uterine contractions without cervical changes. Every year about 15 million babies are born prematurely and preterm birth (PTB) remains the biggest cause of neonatal death. It is also one of the commonest causes of under- 5 deaths. About 50% of preterm births follow spontaneous onset of labour, 30% after premature rupture of fetal membranes and the remaining 20%, iatrogenic due to maternal and fetal medical indications.

There is evidence that the preterm birth rate is increasing in all countries where there are reliable data. Key reasons for the rise in the number of preterm deliveries include a rise in multiple pregnancies from reproductive techniques, widespread obesity with its associated comorbidities of hypertension and diabetes and an increased incidence of sexually transmitted infections. Whilst an improved understanding of some of the underlying mechanisms and advances in technologies have culminated in the introduction of new tools for both thediagnosis of preterm labour and the management of extremely preterm babies, many controversies remain about the optimal methods for the prevention and care of women presenting in preterm labour.

The 'cause' of preterm birth is multifactorial, with social, psychological, and biological factors playing a role. The aetiologies differ according to gestational age, ethnicity, and characteristics unique to each population.

Primary prevention

Primary prevention of PTB involves the provision of interventions before and between pregnancies which enhance the mother's health and reduce risks of her or the baby succumbing to preventable adverse pregnancy conditions. In the past, this aspect of women's health received less attention but awareness is now growing. It comprises of interventions aimed at identifying and improving the 'biochemical, behavioural and social risks of women's health or pregnancy outcomes through prevention and management'. These interventions can be grouped under preconception care, enhanced antenatal care, reducing multiple births and infections, optimizing the management of medical disorders and progesterone prophylaxis.

(a) Preconception care

A recent WHO commissioned report on PTB titled ''Born too soon the 'Global Report' outlines comprehensive measures to prevent PTB. These measures start from preconception right through the pregnancy. Preconception care initiatives, include education on smoking cessation, better family planning and inter pregnancy spacing, economic empowerment programs which alleviate poverty, community based interventions like teenage HPV vaccination, micronutrient food supplementation and partner education to reduce domestic violence.

(b) Enhanced antenatal care

This care is designed to reduce or eliminate complications in women with documented potential risks to their pregnancies. The basic recommended antenatal care package by the National Institute for Clinical Effectiveness (UK) (NICE) are interventions targeted at improving healthy behaviours, promoting early identification of danger signs and increasing the women's knowledge about pregnancy complications such as antepartum haemorrhage and early warning signs of Preterm Labour. Regular antenatal visit is emphasised and those requiring multidisciplinary care on account of medical co-morbidities receive extra attention.

(c) Reducing multiple births

National policies to regulate assisted reproductive techniques (ART) and reduce multiple pregnancies are essential. Women who carry multiple pregnancies whether conceived spontaneously or by ART require close clinical monitoring. Others with the diagnosis of cervical weakness in previous pregnancies need prior identification and plans made to institute early treatment such as elective cervical cerclage or cervical pessary.

(d) Reducing infections

Although the association between PTB and infections is still poorly understood, it is generally acknowledged that maternal infection plays a significant role in the pathogenesis. Goldberg et al. reported that 80% of women presenting with PTL before 30 weeks had evidence of amniotic fluid infection compared to 30% who deliver after 37 weeks. There is also evidence of activation of inflammatory mediators characterized by elevated concentrations of cytokines (IL-6, IL-1, IL-8, and TNF) but there is limited clarity on how these inflammatory agents are linked with the onset of labour. The most recent Cochrane review on this subject confirmed that the only subgroup of women who benefit from antenatal prophylactic antibiotics are those with previous histories of PTL and a positive screen for Bacterial Vaginosis.

(e) Optimising management of medical disorders associated with PTB

Iatrogenic preterm deliveries are commonly due to complications such as diabetes mellitus, hypertension, connective tissue disorders, autoimmune, endocrine and reno-vascular diseases. Optimization of antenatal care with early administration of low dose aspirin, the use of combined obstetric medicine clinics and timely drug modifications all reduce the need for early delivery on account of poorly managed disease.

(f) Progesterone

Progesterone is an essential steroid produced by the corpus luteum for the maintenance of early pregnancy until 7 to 9 weeks of gestation when the placenta takes over this function. The administration of the anti -progesterone, mifepristone induces abortion in early pregnancy. Though the relevance of progesterone in late pregnancy is poorly understood, it appears to help maintain uterine quiescence by inhibiting myometrial contraction through the modulation of cytokine production and inhibiting the expression of contraction associated protein genes within the myometrium. The preventative effect of progesterone on PTB has been extensively studied but some of the results have been discordant. Despite the evidence of potential benefits in selected cases, there is no consensus on the appropriate dose, route of administration, gestation to initiate treatment and long-term effects on infants.

Secondary prevention

Diagnostic modalities

The first step in patients presenting with possible PTL is an appropriate diagnosis. Unfortunately the diagnosis that is often made on the basis of clinical findings is unreliable. In two systematic reviews, only 13.3% of those who fulfilled the criteria of regular uterine contractions with cervical change actually went on to deliver within a week. There is, therefore, a need for a more accurate test to help reduce maternal anxiety and the significant cost incurred with unnecessary interventions in those presenting with 'pseudo PTL'.

Between 30 and 35% of preterm deliveries follow preterm premature rupture of fetal membranes (PPROM). PPROM is, thus, a significant cause of preterm labour. A distinction between the clinical presentation of both PPROM and PTL can be difficult as these could vary from mild symptoms of physiological discharge to those of active labour. The poor sensitivity and specificity of clinical assessments therefore mean that many patients receive needless treatments (tocolytics, steroids, even in-utero transfer (IUT)). A number of studies have suggested that the use of oncofetal fibronectin test (ofFN), the Actim Partus test, transvaginal ultrasound cervical length assessment (CL), Amniosure and Nitrazine test may help improve diagnosis.

(a) Cervical length assessments

In 2013, a Cochrane review failed to recommend cervical length screening for all low risk women. This followed the observation of an inverse relationship between short cervices and rates of PTB. For a given length of short cervix, in a woman with a singleton pregnancy and no prior history of PTB, the sensitivity of the short cervix in the prediction of PTB was 35e40%, with a PPV of 20e30%. Women with a prior history of PTB, however, had an increased sensitivity to 70 % and this was even higher where they had repeated early PTBs. As a general rule, preterm delivery is highly unlikely where the cervical length is greater than 3 cm and highly likely when it is <1.5-2.0 cm. The RCOG guidance recommends that women with a prior history of PTB would require cervical length assessment from 14 weeks to 24 weeks, and that cervical cerclage should be considered where the cervical length <2.5 cm before 24 weeks gestation.

(b) Diagnostic test for PROM

Premature rupture of fetal membranes (PROM) is one of the commonest causes of PTL and is a clinical diagnosis which can sometimes be challenging. Simple point of care diagnostic tests for PROM include (a) confirmatory speculum examination demonstrating pooling of fluid in the vagina and coming from the cervix (b) fern ing of the dried secretions observed under a microscopic, known as arborization (which unfortunately is fast becoming historic as most labour wards to not have side room microscopes) and (c) alkalinity of the fluid as determined by the Nitrazine paper test. This is based on the fact that the normal acidic vaginal milieu (pH of 3.8e4.2) is altered by amniotic fluid to a more basic or neutral pH; however, vaginal discharge, cervical secretions, semen and blood may produce the same changes and result in a false positive test. The Nitrazine paper test has a sensitivity of 90% and false positive rate of 17.0%. Both Nitrazine and Ferning testing are unreliable at earlier gestations.

Conclusion

Preterm birth is a serious, common, and costly public health problem that, despite much effort, remains one of the most complicated and difficult problems to address in obstetrics. Although survival has increased for infants born preterm, the PTB rate has not declined. Primary prevention is an important but limited strategy. However, more understanding and research is needed to gain insight into this complex problem which can have devastating consequences. The unexplained racial disparity in PTB rates and exploration of interventions to reduce infection/inflammatory mediated PTB are important areas for further research. Clearly there is much work still to be done, as preventing prematurity is a challenge we have not yet met.

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