Keine Interessenkonflikte

Screening auf Präeklampsie und ASPRE-Trial

Rüdiger Hammer
praenatal.de

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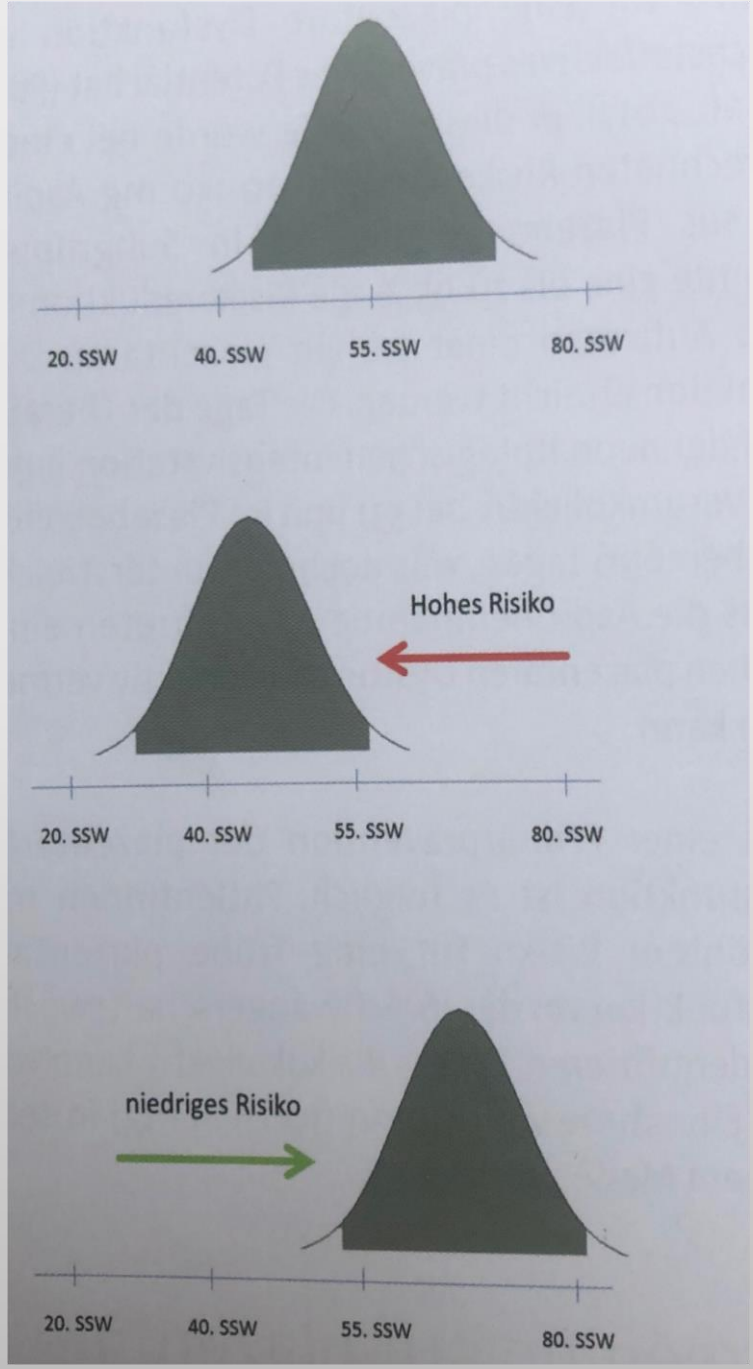
Praeeklampsie

- Inzidenz zwischen 2-8 %
- Hauptursache maternaler und perinataler Mortalität und Morbidität; Spätfolgen

- Unterscheidung in:
- späte Praeeklampsie: > 37 SSW
- frühe Praeeklampsie: < 34 SSW: 0,5 – 0,8 %
  - ursächlich gestörte Trophoblasteninvasion mit gestörtem Remodeling der Aa.spirales

Praeeklampsie

- Grundannahme: jede Schwangere würde eine Praeeklampsie entwickeln (theoretisch in der 55. SSW)
- individuelle Parameter verschieben das Risiko nach vorne oder hinten (FMF)



Methoden zur Risikoerkennung

- Anamnese

- National Institute for Health and Care Excellence (NICE, UK)
- American College of Obstetricians and Gynecologists (ACOG)
- FMF-Algorythmus

Anamnese

- Ethnizität
- Parität (Nullipara)
- Z. n. IvF, ICSI
- Alter (40 Jahre)
- Z. n. Praeeklampsie
- familiäre Praeeklampsie (Mutter, Schwester)
- chron. Hypertonus und Nierenerkrankung
- Diabetes mellitus
- Autoimmunerkrankung (SLE; APS)
- Mehrlinge
- Adipositas (BMI > 30)

Anamnese

Detektionsraten (DR) für

- Praeeklampsie (< 34 SSW): 58 %
- (< 37 SSW): 40 -50 %
- (> 37 SSW): ca. 35 %

- FPR: 10%

NICE

- hohes Risiko:
  - Vorschwangerschaft mit erhöhtem RR
  - chronische Nierenerkrankung
  - Autoimmunerkrankungen (SLE, APS)
  - Diabetes mellitus
  - chronische Hypertonie
- moderates Risiko:
  - Nullipara
  - Vorschwangerschaft > 10 Jahre
  - maternales Alter > 40 Jahre
  - BMI > 35
  - positive Familienanamnese für PE
  - Mehrlingsschwangerschaften

NICE

Testpositiv:

- mindestens 1 hoher Risikofaktor
  oder
- 2 moderate Risikofaktoren

- FPR: 10 %
- DR für PE < 32 SSW: 41 %
- < 37 SSW: 39 %
- > 37 SSW: 34 %

ACOG

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- Nullipara
- Z. n. IvF, ICSI
- Alter (40 Jahre)
- Z. n. Praeeklampsie
- chron. Hypertonus und Nierenerkrankung
- Diabetes mellitus
- Autoimmunerkrankungen (SLE; APS)
- Mehrlinge
- Adipositas (BMI > 35)

ACOG

- DR für PE < 32 SSW: 94 %
- < 37 SSW: 90 %
- > 37 SSW: 89 %

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- FPR: 64,2 %

Finde den Fehler !

FMF

> Fetal Diagn Ther. 2013;33(1):8-15. doi: 10.1159/000341264. Epub 2012 Aug 16.

Competing risks model in early screening for preeclampsia by biophysical and biochemical markers

Ranjit Akolekar [1], Argyro Syngelaki, Leona Poon, David Wright, Kypros H Nicolaides

- Anamnese
- mittlerer arterieller Blutdruck (MAP)
- uteriner PI
- biochemische Parameter (PlGF, PAPP-A)
  (Bayes-Theorem; Akolekar et al, 2012)

- Detektionsrate für
  - PE < 34 SSW: 96 %
  - PE > 37 SSW: 54 %
- FPR 10%

The Fetal Medicine Foundation

Please record the following information and then press Calculate.

Pregnancy type

Singleton or twins

Pregnancy dating

Fetal crown-rump length mm (45-84 mm)

Examination date dd-mm-yyyy

The Fetal Medicine Foundation

Maternal characteristics

Date of birth dd-mm-yyyy

Height cm ft in

Weight kg lbs

Racial origin

Smoking during pregnancy Yes No

Mother of the patient had PE Yes No

Conception method

Medical history

Chronic hypertension Yes No

Diabetes type I Yes No

Diabetes type II Yes No

Systemic lupus erythematosus Yes No

Anti-phospholipid syndrome Yes No

Obstetric history

Nulliparous (no previous pregnancies at ≥24 weeks)

Parous (at least one pregnancy at ≥24 weeks)

Biophysical measurements

Mean arterial pressure mmHg

Mean uterine artery PI

Date of measurement dd-mm-yyyy

Biochemical measurements

Includes serum PLGF No MoM Raw data

Includes serum PAPP-A No MoM Raw data

ULTRASOUND in Obstetrics & Gynecology

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Screening for pre-eclampsia by maternal factors and biomarkers at 11–13 weeks' gestation

M. Y. Tan, A. Syngelaki, L. C. Poon, D. L. Rolnik, N. O'Gorman, J. L. Delgado, R. Akolekar, L. Konstantinidou, M. Tsavdaridou, S. Galeva, U. Ajdacka, F. S. Molina, N. Persico, J. C. Jani, W. Plasencia, E. Greco, G. Papaioannou, A. Wright, D. Wright, K. H. Nicolaides ... See fewer authors

First published: 13 June 2018 | https://doi.org/10.1002/uog.19112 | Citations: 65

ABSTRACT

Objective

To examine the performance of screening for early, preterm and term pre-eclampsia (PE) at 11–13 weeks' gestation by maternal factors and combinations of mean arterial pressure (MAP), uterine artery (UtA) pulsatility index (PI), serum placental growth factor (PlGF) and serum pregnancy-associated plasma protein-A (PAPP-A).

Methods

The data for this study were derived from three previously reported prospective non-intervention screening studies at 11 + 0 to 13 + 6 weeks' gestation in a combined total of 61 174 singleton pregnancies, including 1770 (2.9%) that developed PE. Bayes' theorem was used to combine the prior distribution of gestational age at delivery with PE, obtained from maternal characteristics, with various combinations of biomarker multiples of the median (MoM) values to derive patient-specific risks of delivery with PE at < 37 weeks' gestation. The performance of such screening was estimated.

Results

In pregnancies that developed PE, compared to those without PE, the MoM values of UtA-PI and MAP were increased and those of PAPP-A and PlGF were decreased, and the deviation from normal was greater for early than late PE for all four biomarkers. Combined screening by maternal factors, UtA-PI, MAP and PlGF predicted 90% of early PE, 75% of preterm PE and 41% of term PE, at a screen-positive rate of 10%; inclusion of PAPP-A did not improve the performance of screening. The performance of screening depended on the racial origin of the women; on screening by a combination of maternal factors, MAP, UtA-PI and PlGF and using a risk cut-off of 1 in 100 for PE at < 37 weeks in Caucasian women, the screen-positive rate was 10% and detection rates for early, preterm and term PE were 88%, 69% and 40%, respectively. With the same method of screening and risk cut-off in women of Afro-Caribbean racial origin, the screen-positive rate was 34% and detection rates for early, preterm and term PE were 100%, 92% and 75%, respectively.

Conclusion

Screening by maternal factors and biomarkers at 11–13 weeks' gestation can identify a high proportion of pregnancies that develop early and preterm PE.

ORIGINAL ARTICLE

Aspirin versus Placebo in Pregnancies at High Risk for Preterm Preeclampsia

Daniel L. Rolnik, M.D., David Wright, Ph.D., Liona C. Poon, M.D., Neil O'Gorman, M.D., Argyro Syngelaki, Ph.D., Catalina de Paco Matallana, M.D., Ranjit Akolekar, M.D., Simona Cicero, M.D., Deepa Janga, M.D., Mandeep Singh, M.D., Francisca S. Molina, M.D., Nicola Persico, M.D., et al.

2017

The NEW ENGLAND JOURNAL of MEDICINE

- 1776 Frauen mit erhöhtem Risiko einer frühen Praeeklampsie (> 1:100 nach FMF-Kriterien)
- randomisierte Doppelblindstudie
- primäres Outcome: Geburt mit PE < 37.SSW
- ASS 150 mg/d abends vor 16 SSW bis 36 SSW
- Senkung der Inzidenz:
- PE < 34 SSW: 82 %
- PE < 37 SSW: 62 %
- PE > 37 SSW: kein signifikanter Effekt

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2017

The NEW ENGLAND JOURNAL of MEDICINE

- für sekundäres Outcome (z. B. Totgeburt, IUGR) konnte kein Effekt dargestellt werden, was an der relativ zu niedrigen Fallzahl für solche Betrachtungen liegt
- Subgruppenanalysen zeigten, dass Patientinnen mit einem präexsistentem Hypertonus nicht vom ASS profitieren (Poon et al; Am J Obstet und Gynecol 2017)
- Nbw (Blutung, vorzeitige Placentalösung)sind wohl eher unbedeutend, aber nicht sicher auszuschließen

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