

## Comparison of placental resistin expression in pregnancies complicated by preeclampsia and fetal growth restriction

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### Objective

To compare placental resistin expression in pregnancies complicated by preeclampsia and fetal growth restriction (FGR).

### Methods

This cross-sectional study included 27 healthy pregnant women, 25 women with mild preeclampsia, 26 women with severe preeclampsia, 30 women with pregnancies complicated by isolated FGR. All groups were matched for maternal age and body mass index (BMI). After delivery, placental resistin expression was determined by immunohistochemistry.

### Results

There were no statistically differences in terms of maternal age, BMI or obstetric history among the four groups ( $p > 0.05$ ). Gestational week and birth weight were significantly lower in severe preeclampsia and isolated FGR groups compared to controls ( $p < 0.01$  for both). There was a statistically significant between-group difference in placental resistin expression ( $p = 0.015$ ). Pairwise comparisons between the groups revealed significantly increased resistin expression in the severe preeclampsia and isolated FGR groups compared to controls.

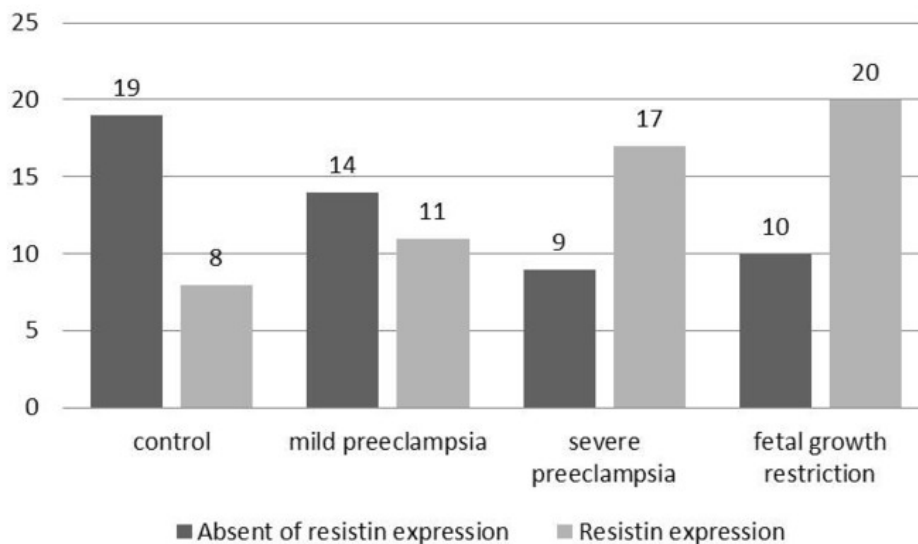
### Conclusion

Our data suggests that resistin is involved in the pathogenesis of preeclampsia and fetal growth restriction.

**Table.** Comparison of obstetric characteristics and neonatal outcome of study groups.

| Variables                | Control<br>n=27 | Mild preeclampsia<br>n=25 | Severe preeclampsia<br>n=26 | Fetal growth restriction<br>n=30 | p      | p <sup>1</sup> | p <sup>2</sup> | p <sup>3</sup> |
|--------------------------|-----------------|---------------------------|-----------------------------|----------------------------------|--------|----------------|----------------|----------------|
| Maternal age in years    | 28.1 ± 5.8      | 25.7 ± 5.8                | 28.8 ± 5.8                  | 26.8 ± 5.8                       | 0.234  |                |                |                |
| Gestation age in weeks   | 38.4 ± 0.7      | 37.9 ± 1.5                | 37.2 ± 1.2                  | 37.4 ± 1.3                       | 0.001  | 0.115          | <0.001         | 0.002          |
| Gravidy                  | 2 (1-7)         | 1 (1-5)                   | 2 (1-10)                    | 1 (1-5)                          | 0.063  |                |                |                |
| Parity                   | 1 (0-4)         | 1 (0-3)                   | 1 (0-3)                     | 1 (0-4)                          | 0.091  |                |                |                |
| BMI in kg/m <sup>2</sup> | 30.3 ± 2.7      | 31.9 ± 5.2                | 30.1 ± 4.2                  | 30.3 ± 4.3                       | 0.718  |                |                |                |
| Birth weight in g        | 3474 ± 332      | 3107 ± 710                | 2196 ± 622                  | 2225 ± 267                       | <0.001 | 0.038          | <0.001         | <0.001         |

Values are given as mean ± SD ( standart deviation ), median (range) . If the Kruskal–Wallis test was positive ( $p < 0.05$ ) then post-hoc analysis was applied.  $p$ , between four groups;  $p^1$ , between mild preeclampsia and control;  $p^2$ , between severe preeclampsia and control;  $p^3$ , between fetal growth restriction and control. BMI; body mass index.



**Figure.** Placental resistin expression in study subjects and controls. Values are given as number.