

Kidney diseases

W068

EVALUATION OF URINARY PROTEINS IN WOMEN WITH PREECLAMPSIA BY SDS PAGE

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BACKGROUND-AIM

Proteinuria is one of the cardinal features of preeclampsia, which is a common and potentially severe complication of pregnancy. The aim of this study was to compare the concentration of total urinary proteins in women with normal pregnancy and preeclampsia and to determine the most common types of proteinuria in preeclampsia using sodium dodecyl sulfate polyacrylamide gel electrophoresis - SDS PAGE.

METHODS

In this study were included two groups: first group (n=42) women with preeclampsia and second group (n=20) women with normal pregnancy. The average age of women with normal pregnancy was 33.6±4.1, while in women with preeclampsia was 30.7±5.6. Urinary samples were obtained and the following tests performed: chemical analyses of urine with dipsticks, determination of total urinary proteins by turbidimetric method with sulfosalicylic acid and electrophoretic separation of urinary proteins by horizontal gradient (4-22%) SDS PAGE according to Görg.

RESULTS

Concentration of total urinary proteins was significantly higher in the women with preeclampsia than in women with normal pregnancy (p<0,05). Electrophoretic patterns of urinary proteins in all women with normal pregnancy were normal (only albumin fraction). All women with preeclampsia showed abnormal electrophoretic patterns. In 9,1% of women with preeclampsia was found high molecular weight proteins (glomerular type of proteinuria), in 2,9% was found low molecular weight proteins (tubular type of proteinuria), in 35,7% was found postrenal proteinuria and in 52,3% was found high and low molecular weight proteins, corresponding to mixed proteinuria (glomerular and tubular type of proteinuria).

CONCLUSION

The present study shows that SDS PAGE of urinary proteins is high sensitive method for detection of urinary proteins in pregnant women. Screening for proteinuria is essential in detection of preeclampsia in antepartum care of pregnant women. Early detection of proteinuria is important for well-timed treatment and reduction of complications in pregnancy.