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Analysis of Proteinuria Estimation Methods in Hypertensive Disorders of Pregnancy

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Abstract

Purpose of the Study

The gold-standard 24-h urine collection method for protein estimation is inconvenient and is associated with a delay in laboratory analysis. This study was undertaken to compare sulphasalicylic acid test, urine dipstick

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For significant proteinuria, sulphosalicylic acid test with 1 + proteinuria has sensitivity, specificity, PPV and NPV of 59, 48, 39, 67, whereas with 2 + has sensitivity, specificity, PPV and NPV of 44, 88, 75 and 67%, respectively, dipstick test with 1 + proteinuria has sensitivity, specificity, PPV and NPV of 71, 52, 54 and 70%, whereas with 2 + has sensitivity, specificity, PPV and NPV of 49, 87, 75 and 69%, respectively. The spot urine protein-to-creatinine ratio and 24-h urine protein were significantly correlated ($r = 0.98$; $p < 0.0001$). The cut-off value for the protein-to-creatinine ratio as an indicator of protein excretion ≥ 300 mg/day was 0.285. The sensitivity, specificity PPV and NPV were 100, 99, 100 and 99%, respectively.

Conclusion

The spot urine protein-to-creatinine ratio is a better method for estimation of proteinuria in pre-eclampsia.

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Fig. 1

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Conflict of interest

The authors declare that they have no conflict of interests.

Ethics Approval

This study with reference number IEC No. SEC/2011/1/1 and dated 24 February 2011 has been approved by Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Puducherry, India-605006, research committee and institute ethics subcommittee (human studies) on 13 January 2011.

Additional information

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