

POSTER SYMPOSIUM – P1

Evaluation of Serum Protein Electrophoresis Reports in Clinical Chemistry Laboratory

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INTRODUCTION

Serum protein electrophoresis (SPE) is a technique used to separate and quantify monoclonal paraproteins in clinical laboratories. Clinicians use SPE results to identify patients with protein disorders, particularly for diagnosis and monitoring of multiple myeloma.

OBJECTIVE

To audit the serum protein electrophoresis results in clinical chemistry laboratory.

MATERIALS AND METHODS

Sebia Capillary 2 electrophoresis is an automated system used in clinical chemistry laboratory, RIPAS Hospital. Depending on the bands seen, a follow-up tests of capillary and gel immunofixation electrophoresis (IFE) will be performed for confirmation. The capillary immunofixation is performed using the same system, whereas the gel immunofixation is performed using Sebia Hydrasys 2 system. The patient information, SPE and IFE reports are then tabulated in an excel sheet.

RESULTS

A total number of 268 samples were requested for SPE from January to October 2017. 191 (71.3%) samples were analysed for immunofixation electrophoresis. 120 (62.8%) samples were analysed using gel electrophoresis, 64 (33.5%) samples using capillary electrophoresis and 7 samples (3.7%) went on to both gel and capillary electrophoresis. Hematology unit has the highest request (n=113, 42.2%) with a positive results of 67.9%. Immunoglobulins IgG lambda and IgG kappa are the most common result with 28.6% and 25.9% respectively.

CONCLUSIONS

The automated Sebia Capillary 2 electrophoresis system is a fast technique for SPE study with minimal operator skill required. However, a dual system with the Sebia Hydrasys 2 system for gel immunofixation electrophoresis is the best and effective practice for the identification and confirmation of bands, especially from the hematology unit, which has the highest request and some undefined bands.

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