Patient ID : p\_id Name : p\_name Age/Sex : age\_sex
Ref. by : doctor\_ref Lab no : Date : test\_date
Protein Electrophoresis, Serum
Capillary Electrophoresis
Test name Results Unit Normal range
Protein Electrophoresis
Protein Total 6.2 g/dL 6.0-8.3
Albumin 3.3 g/dL 3.5-5.2
Alpha 1 Globulin 0.5 g/dL 0.2-0.4
Alpha 2 Globulin 0.9 g/dL 0.5-0.9
Beta 1 Globulin 0.4 g/dL 0.3-0.5
Beta 2 Globulin 0.3 g/dL 0.2-0.5
Gamma Globulin 0.8 g/dL 0.8-1.4
A:G Ratio 1.14 1.20-2.00
Comment Hypoalbuminemia present.
Increased in Alpha-1, alpha-2 globulin. Please rule acute/subacute inflammation.No "M" spike seen..
Advised Kindly correlate with clinical and radiological findings.
Interpretation :
1. Serum protein electrophoresis is commonly used to identify multiple myeloma and related disorders.
2. Electrophoresis is a method of separating proteins based on their physical properties and the pattern is dependent on the fractions of 2 types of protein: Albumin and Globulin (alpha1, alpha2, beta and gamma).
Component Compositions Interferences
Albumin Albumin Lipoproteins, drugs, bilirubin, radiological contrast
Alpha1-Globulins Alpha1 antitrypsin, Alpha-1 acid glycoprotein -
Alpha 2 Globulins Alpha-2 macroglobulin, haptoglobulin Haptoglobin-hemoglobin complex
Beta Globulins Transferrin, Beta-lipoprotein, IgA, IgM and sometimes IgG with complement protein. Fibrinogen
Gamma Globulins IgG, IgA, IgM, IgD, IgE CRP
Remarks :
1.The following conditions require serum immunofixation to differentiate monoclonal and polyclonal :
i. A well defined 'M' band, faint band.
ii. Chronic inflammatory pattern (decreased albumin, increased alpha, increased Gamma region), which may mask the monoclonal band.
iii. Isolated increase in any region, with otherwise normal pattern.
2. Shouldering of albumin peak along anodal or cathodal side may be seen with lipoproteins, drugs, bilirubin or radiological contrast.
3. Presence of an abnormal peak, of generally gamma mobility, but sometimes beta or alpha2 (exceptionally alpha1).
Please note Se protein electrophoresis does not detect all cases of multiple myeloma. Free light chain assay is recommended along with serum protein electrophoresis to improve detection rate.
NOTE : This test was processed at third party lab.
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