

REPORT

| | | | |
|--------------------|---|-------------------|-------------------------|
| Patient Name | : Mrs. JULEKHA | Reg. No. | : 00261912050041 |
| Age and Sex | : 37 Yrs / Female | PCC Code | : PCL-HR-075 |
| Referring Doctor | : KOS LAB AMBALA | Sample Drawn Date | : 05-Dec-2019 11:00 AM |
| Referring Customer | : KOS LAB AMBALA | Registration Date | : 07-Dec-2019 05: 54 AM |
| Vial ID | : J0303405 | Report Date | : 07-Dec-2019 03: 49 PM |
| Sample Type | : Serum | Report Status | : Final Report |
| Client Address | : 1936 , NEW HOUSING BOARD COLONY , NEAR BADA PARK. PANIPAT | | |

CLINICAL BIOCHEMISTRY

| Test Name | Obtained Value | Units | Bio. Ref. Intervals(Age/Gender specific) |
|---|----------------|-------|---|
| *Free Kappa(Light Chain) - Serum | 5.07 | g/L | 1.38 - 3.75 |
| *Free lambda(Light chain) | 2.70 | g/L | 0.93 - 2.42 |
| *Free kappa/Lambda Ratio | 1.88 | | 1.29-2.61 Please note the change in reference range |


Comments:

- The molecular structure of Immunoglobulin (Ig) consists of heavy chains and light chains. Five kinds of Igs have different heavy chains but have the same two kinds of light chains: Kappa and Lambda. The ratio of Kappa and Lambda is approximately 2:1. Abnormal M protein appears in sera of MM(Multiple Myeloma) patients.
- Because the proliferation is monoclonal and malignant, it exhibits only the increase of one type of light chains in blood or urine is very important diagnosis, typing and monitoring of MM patients.
- In case that one type of light chain in blood or urine increases abnormally while the other type decreases and thus the ratio Kappa and Lambda (2:1) is changed , diagnosis as MM should be considered.
- Light chains may also increase in patients who suffer from autoimmune diseases infection tumor, acute and chronic hepatitis, hepatic cirrhosis and so on, however in these cases the kappa and lambda increase simultaneously. Simultaneous increase of Kappa and Lambda chains is also observed in urine of patients suffering from nephropathy and diabetes.

Method : Immunoturbidometry

Result rechecked and verified for abnormal cases

*** End Of Report ***



DR. P SATYANARYANA
MD BIOCHEMISTRY

REPORT

| | | | |
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| Age and Sex | : 37 Yrs / Female | PCC Code | : PCL-HR-075 |
| Referring Doctor | : KOS LAB AMBALA | Sample Drawn Date | : 05-Dec-2019 11:00 AM |
| Referring Customer | : KOS LAB AMBALA | Registration Date | : 07-Dec-2019 05:54 AM |
| Vial ID | : J0303405 | Report Date | : 07-Dec-2019 03:07 PM |
| Sample Type | : Serum | Report Status | : Final Report |
| Client Address | : 1936 , NEW HOUSING BOARD COLONY , NEAR BADA PARK. PANIPAT | | |

CLINICAL BIOCHEMISTRY

| Test Name | Obtained Value | Units | Bio. Ref. Intervals(Age/Gender specific) |
|-----------|----------------|-------|--|
|-----------|----------------|-------|--|

[PDF Attached](#)
Protein Electrophoresis (Serum)

| | | | |
|-----------------------|--|------|-------------|
| Albumin Fraction | 1.54 | g/dl | 3.20 - 5.00 |
| Alpha 1-globulin | 0.59 | g/dl | 0.10 - 0.40 |
| Alpha 2-globulin | 1.28 | g/dl | 0.60 - 1.00 |
| Beta globulin | 0.21 | g/dl | 0.60 - 1.30 |
| Gamma-globulin | 1.88 | g/dl | 0.70 - 1.50 |
| Protein, Total | 5.50 | g/dl | 6.0 - 8.0 |
| A/G Ratio | 0.39 | | 1.0 - 2.1 |
| Myeloma Band (M-Band) | 0.0 | g/dl | 0.0 |
| Impression | Albumin decreased with raised Alpha and Gamma globulins. | | |
| Advise | Please correlate clinically. | | |

Comments:

- A homogeneous spike-like peak in a focal region of the gamma-globulin zone indicates a monoclonal gammopathy. Monoclonal gammopathies are associated with a clonal process that is malignant or potentially malignant, including multiple myeloma, Waldenström's macroglobulinemia, solitary plasmacytoma, smoldering multiple myeloma, monoclonal gammopathy of undetermined significance, plasma cell leukemia, heavy chain disease, and amyloidosis.
- M-protein (in the gamma region) level greater than 3 g/dL should be interpreted along with other radiologic and haematological findings to arrive at a diagnosis of Multiple myeloma and must not be considered in isolation. Occasionally M protein may appear as a narrow spike in the beta or alpha2 regions also. Up to one fifth of patients with Myeloma may have an M-protein spike of less than 1 g/dL.
- Hypogammaglobulinemia on serum protein electrophoresis occurs in about 10% of patients with multiple myeloma who do not have a serum M-protein spike. Most of these patients have a large amount of Bence Jones protein (monoclonal free kappa or lambda chain) in their urine, wherein urine protein electrophoresis should be performed. Monoclonal gammopathy is present in up to 8 percent of healthy geriatric patients.

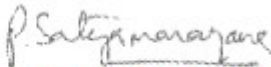
Method : Gel Electrophoresis

Correlate Clinically.

Result rechecked and verified for abnormal cases

Laboratory is NABL Accredited

*** End Of Report ***



DR. P SATYANARYANA
 MD BIOCHEMISTRY

PATHCARE LABS

Protein Electrophoresis Report

Patient Name

Mrs. JULEKHA

Measurement Date: 07-12-2019 15:00:10

Age / Sex

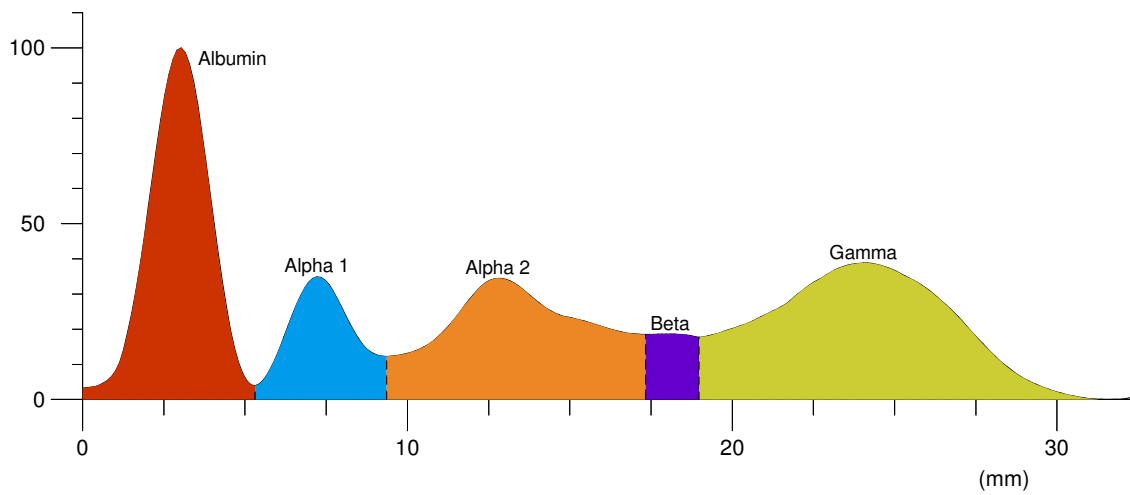
37 YRS/Female

Vail ID

J0303405

Total Protein

5.50 (g/dl)



| Index | Band | Rel. Area | Conc. (g/dl) | Range (g/dl) |
|-------|---------|-----------|--------------|---------------|
| 1 | Albumin | 28.06% | 1.54 L | 3.20 ... 5.00 |
| 2 | Alpha 1 | 10.66% | 0.59 H | 0.10 ... 0.40 |
| 3 | Alpha 2 | 23.29% | 1.28 H | 0.60 ... 1.00 |
| 4 | Beta | 3.83% | 0.21 L | 0.60 ... 1.30 |
| 5 | Gamma | 34.17% | 1.88 H | 0.70 ... 1.50 |
| Total | | | 5.50 | |

Ratio A/G Ratio 0.39

Comments

Albumin decreased with raised Alpha and Gamma globulins. Please correlate clinically.

Analyst Sign

Verified By