Reference No.	**: - 1912220462**	Age/Gender	: **49 Yrs/Female**
Pt's Name	**: Mrs. RAJ KAUR**		**AMB-KOS**
Referred By	**: NA**		
Sample Collection Date/Time	**: 12-Dec-2019**	Date	:**12-Dec-2019**
Sample Receiving Date/Time	**: 12-Dec-2019 01:48AM**	Approvel Date	:**12-Dec-2019 06:10AM**
Sample From	**: KOS DIAG LAB**	Report Print Time	**:22-Dec-2019 12:08AM**

BIOCHEMISTRY

Test Description	Observed Value	Biological Reference Interval
	Ceruloplasmin*	
Ceruloplasmin*	0.30	0.16-0.45 g/l

Comments

Ceruloplasmin is an acute phase protein and a transport protein and useful for investigation of patients with possible Wilson disease. Decreased concentrations occur during recessive autosomal hepatolenticular degeneration (Wilson disease). On a pathochemical level, the disease, which is accompanied by reduced ceruloplasmin synthesis, occurs as a consequence of missing Cu(2+) incorporation into the molecule due to defective metallothionein. This results in pathological deposits of copper in the liver (with accompanying development of cirrhosis), brain (with neurological symptoms), cornea (Kayser-Fleischer ring), and kidneys (hematuria, proteinuria, aminoaciduria). In homozygous carriers, ceruloplasmin levels are severely depressed. Heterozygous carriers exhibit either no decrease at all or just a mild decrease.

The rare Menkes syndrome is a genetically caused copper absorption disorder with concomitant lowering of the ceruloplasmin level. Protein loss syndromes and liver cell failures are the most important causes of acquired ceruloplasmin depressions.

As ceruloplasmin is a sensitive acute phase reactant, increases occur during acute and chronic inflammatory processes. Great increases can lead to a green-blue coloration of the sera.

Interpretation

- Values < 0.14 g/L are expected in Wilson disease.
- Values vary considerably from patient to patient and may be in the normal range in some patients with Wilson disease (indicating **a different primary defect).**

Cautions

- Ceruloplasmin levels are affected by infections (ceruloplasmin is a late acute phase reactant) and liver function.
- Birth control pills and pregnancy increase ceruloplasmin levels.
- Ceruloplasmin levels are not always extremely low in patients with Wilson disease.

Clinical Reference

Cox DW, Tumer Z, Roberts EA: Copper transport disorders: Wilson's disease and Menkes disease. In Inborn Metabolic Disease. Edited by J Fernandes, JM Sandubray, F VandenBerghe. Berlin, Heidelberg, New York, Springer-Verlag, 2000, pp 385-391

Laboratory is NABL Accredited

*** End Of Report ***

Dr. Ajay Kumar
Ph.D. (BARC)
Specialisation in Thyroid Physiology

Dr. Rohini Bhatia
M.B.B.S., M.D. (Pathology)
Hony Consultant Pathologist

Dr. Malti Goyal
M.B.B.S., M.D. (Path)
Hony Consultant Pathologist