Charak dhar DIAGNOSTICS Pvt. Ltd.

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Phone : 0522-4062223, 9305548277, 8400888844
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CMO Reg. No. RMEE 2445133
NABL Reg. No. MC-2491
Certificate No. MIS-2023-0218

Patient Name	: Ms.MEENU SHUKLA	Visit No	: CHA250041747
Age/Gender	: 34 Y/F	Registration ON	: 08/Mar/2025 11:46AM
Lab No	**: 10139042**	Sample Collected ON	: 08/Mar/2025 11:56AM
Referred By	: Dr.QMH	Sample Received ON	: 08/Mar/2025 12:00PM
Refer Lab/Hosp	: CHARAK NA	Report Generated ON	: 08/Mar/2025 04:40PM
Doctor Advice	: QUAD TRIPLE		

PR.

Test Name	Result	Unit	Bio. Ref. Range	Method

QUAD TRIPLE

CLINICAL DETAILS

Date of Birth	20/09/90
AGE AT TERM	34.8 Years
MATERNAL WEIGHT	50.0 Kg
GESTATIONAL AGE	20 WEEKS 1 DAYS
USG SCAN DATE	07/03/25
PREVIOUS TRISOMY	NO
PREGNANCY	SINGLE
DIABETES MELITUS	NO
SMOKING	NO
IVF	NO

RESULT OF MEASURED VALUE,RISK VALUE

MOM AFP	1.20
MOM ESTRIOL, UNCONJUGATED	1.30
MOM HCG	0.88
MOM INHINBIN A	0.69

RISK FACTOR

AGE RISK AR TERM	1:442
RISK FOR TRISOMY 21	1:46200
RISK FOR TRISOMY 18	1:7870
RISK FOR NTD	1:99000
Result	Negative

INTERPRETATION:-

Maternal serum AFP. hCG and uE3 levels in various disorders

Disorder	AFP MOM	HCG Mom	uE3 MoM
Open Spina	High	Normal	Normal
Anencephaly	High or very high	Normal	Very Low
Down Synd	Low	High	Low
Trisomy 18	Low	Low	Low
Tri 21 & NTD	High or Low	Low	Low
Hydrops feta	Normal	High	Low
Turner Synd	Normal	High	Low
Fetal Demis	High or Low	High or Very Low	Very High

[Checked By]

Print.Date/Time: 08-03-2025 17:21:55

*Patient Identity Has Not Been Verified. Not For Medicolegal

DR. NISHANT SHARMA PATHOLOGIST
DR. SHADAB PATHOLOGIST
DR. ADITI D AGARWAL PATHOLOGIST

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Cut offlevels in various disorders and detection rate

ABNORMALITY	CUT OFF DETECTION RATE (MOM)	FALSE POSITIVE
NTD	≥2.5 70-75%	2-4%
TRISOMY- 21	1:270	65% 5%
TRISOMY -18	1:100	60% 0.30%

Introduction , clinical significance and interpretation of quad screen

The Triple marker screen is a group of four tests (AFP, hCG and unconjugated estriol) that are used as a screening test for certain fetal abnormality in the second trimester(14-22 wks) of pregnancy. The test evaluate the risk that a fetus has certain abnormalities, including Down syndrome (trisomy 21) , Edwards syndrome (trisomy 18) , and neural tube defects such as spina bifida or a condition called anencephaly.

Alpha-fetoprotein (AFP) is a protein produced by fetal tissue. During development, AFP levels in fetal blood and amniotic fluid rise until about 28 weeks, and then levels gradually fall until birth. Some AFT crosses the placenta and appears in the maternal blood. An AFP test may be performed by itself to test for neural tube defects , especially when risk for chromosomal abnormalities [Down syndrome and Edwards syndrome] have already been assessed using First trimester screening .(10-14 wks).

Human chorionic gonadotropin is a hormone produced by the placenta. Levels in maternal blood rise for the first trimester of pregnancy and then decrease during the remainder of the pregnancy.

Unconiugated estriol (UE3) is a form of estrogen that is produced by the fetus through metabolism . This process involves the liver, adrenals , and the placenta. Some of the unconjugated estriol crosses the placenta and can be measured in the mother's blood. Levels rise around the 8th week and continue to mcrease until shortly before delivery.

These tests have been established as a triple marker screen use mathematical calculation involving the levels of these 3 substances (AFP, hCG and unconjugated estriol) and considerations of maternal age, family history, weight, race, and diabetic status are used to determine a numeric risk for Down syndrome and for a few other chromosomal abnormalities such as Edwards syndrome [Trisomy 18) in the fetus. This risk is compared with an established cut-off. If the risk is higher than the cut-off value, then it is considered a positive screening test or increased risk exists for carrying a fetus with one of the discussed abnormalities.

What is Down syndrome?

Down syndrome (D5) is a chromosomal abnormality, also called Trisomy 21, that affects about 1 in 800 live births. People with DS have an extra copy of part or all of chromosome Z1. Most affected children have some retardation of growth and development. The risk of carrying a fetus with Down syndrome increases with the mother's age, especially in women over 40 years old.

For more information, visit the National Down Syndrome Society.

What is a neural tube defect?

Neural tube defects are serious birth defects: the brain, spinal cord, or their coverings do not develop completely. There are three kinds of neural tube defects:

- Anencephaly : incomplete development of the brain and the skull.
- Encephalocele: a hole in the skull through which brain tissue protrudes.
- Spina bifida: the most common neural tube defect, in which the spine does not close properly during early pregnancy

For more information on spina bifida. visit the Spina Bifida Association 0fAmerica.

***** End Of Report *****

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