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A RARE CASE OF MULTIPLE FETAL ANOMALIES – CLEFT LIP CLEFT PALATE, CORPUS CALLOSUM AGENESIS, BLAKE'S POUCH CYST AND SINGLE UMBILICAL ARTERY. A CASE REPORT

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ABSTRACT
Fetal anomalies may also be known as congenital anomalies or birth defects. There are two general categories of fetal anomalies, structural anomalies and functional anomalies. Almost one fourth of all global neonatal deaths occur in India. Congenital anomalies is one of the largest cause of neonatal mortality in the India. Following is a rare case report of a female G2P1 A1 with 18.6 weeks pregnancy with multiple fetal anomalies and having guarded fetal prognosis. Her history revealed nothing abnormality except raised Alpha feto protein levels. Ayurveda can be helpful as a preventive measure through its treatment modalities like pre conception preparation, counselling for dietary and lifestyle modifications. Thus can help in minimizing the rate of congenital anomalies to a certain extent.

KEYWORDS: Congenital anomalies, Ayurveda, preventive, pre conception counseling.

INTRODUCTION
Fetal anomalies refer to unusual or unexpected conditions in a baby's development during pregnancy. Congenital anomalies or congenital malformations or birth defects are terms used to describe developmental disorders present at birth. Birth defects are the leading cause of infant mortality and may be structural functional, metabolic, behavioural or hereditary. They can contribute to long-term disability, which may have significant impacts on individuals, families, health-care systems, and societies.[1]

The causes of birth defects are divided in two categories –genetic factors (chromosomal abnormalities) and environmental factors (drugs and viruses).

There are two general categories of fetal anomalies -2

- **Structural anomalies** affect the developing baby's body parts, such as their heart, lungs, kidneys, limbs or facial features. Heart defects, missing toes, cleft lip and spina bifida are examples of structural birth defects.

- **Functional anomalies** affect how a body part or body system works, such as the brain, nervous system, or sensory perception. Examples of functional birth defects include seizures, blindness, developmental disabilities, muscular dystrophy and Down syndrome.

- Some fetal anomalies may affect both the baby's structure and function.
  Many genetic disorders can be detected early in pregnancy using various non -invasive and invasive techniques. These techniques are outlined below.

A) **Non -invasive**
1) USG scans -an ultrasound scan to check for fetal anomalies as part of a routine prenatal testing usually between weeks 18 and 23 of pregnancy.

2) Blood tests -Measuring maternal serum alpha-fetoprotein, unconjugated estriol, beta-human chorionic gonadotropin (HCG) and inhibin between 15-22 weeks (Quadruple Test).

B) **Invasive** fetal tissue sampling techniques include the following

- Amniocentesis
- Chorionic villus sampling (CVS)
  Following is a case report of a fetus having multiple congenital anomalies and guarded fetal prognosis.

Case Report
A female patient of 32 years, came for routine checkup for ANC.

Her obstetric history – G2 P1 L1 A0 with 1st female baby delivered by cesarean section And now having pregnancy of 18 weeks 6 days.

Her Quadruple test showed increased levels of maternal serum Alpha feto protein (3.46 MoM) She had no H/o consanguineous marriage. Her first child was normal and having no abnormality.

Her family history revealed congenital defect of? Esophagus in one of her siblings which died within two months after birth.

Rest history showed nothing abnormal regarding medications, dietary habits or any exposure to environmental factors

Ultrasonography showed
Single Umbilical Artery
Unilateral cleft lip
Fetal head- Posterior fossa cyst communicating with fourth ventricle- Blake pouch cyst
Dilated lateral ventricle
Corpus callosum not seen

DISCUSSION

Neonates with SUA (single umbilical artery) are at a higher risk of congenital anomalies and chromosomal abnormalities. The most common congenital anomalies associated with SUA are renal, followed by cardiovascular and musculoskeletal.[3]

Cleft lip (CL) and/or cleft palate (CP) is one of the most common visible congenital deformities of the face. The affected individuals may have both cleft lip and palate (CLP) or either on its own. The incidence of clefts in India is around 1:800–1:1000.[4]

Blake's pouch cyst (BPC), a rare cystic malformation in the posterior fossa, is believed to be caused by the congenital expansion of the posterior membranous area that normally regresses during embryogenesis.[5]

In this case the fetus had multiple anomalies and was advised termination of pregnancy. As a specialty of Ayurveda six procreative factors - M*atrija* (maternal), *Pitrija* (paternal), *Atmaja* (Soul), *Ras aja* (Nutritional), *Satmyaja* (Wholesomeness), and *Sattva* (Psych / Mind).have been described in all Ayurveda Samhita's as causative factors of congenital, hereditary, and genetic anomalies (by mutation and epigenetics) – before conception, at the time of conception, and after conception, that is, during pregnancy.[6]

Above all the main causes include abnormalities of ovum and sperm (*beeja*), deeds of previous life (*Atma karma*), uterine abnormality *(Aashaya*), Abnormal time (*Rutukala*) and dietetics along with mode of life of parents. Similarly *Vata* vitiation and misconducts are also responsible for birth defects.[7]

In this case all soft tissue abnormality was detected and according to Ayurveda all soft tissues develop from *matruja* (maternal) *bhav.* And this should be taken into considerstion before next pregnancy.

CONCLUSION

Like in our case the patient should be advised for prenatal counselling, preparation before next conception. In Ayurveda *garbhadhan vidhi* is also explained, which includes prenatal counselling, preparation of both the parents by purification of body *(shodhana* with *panchakarma.)* dietary advice and modifications in lifestyle to pacify the *doshas* and *dhatus* and maintain their equilibrium and also to regularize their metabolism, Also after conception *Garbhini paricharya* has been described which contains a regime for nine months. It includes dos and don'ts for diet, medications and code of conduct.[8]

All the things are described to prevent congenital abnormalities and to have a healthy progeny to a healthy mother.

A quarter of all global neonatal deaths occur in India. Congenital anomalies constitute the fifth largest cause of neonatal mortality in the country. To prevent congenital defects and to have a healthy normal baby Ayurveda can play a vital role at present. If the rate of congenital anomalies is even reduced to a certain extent, by following the possible wholesome and righteous concepts of Ayurveda it will be of great contribution to the society.

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