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GASTROSCHISIS ASSOCIATED WITH OTHER ANOMALIES - A CASE REPORT

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ABSTRACT

Aim of the study :-The objective of present study is to report a case of gastrochisis associated with multiple congenital anomalies that is born to consanguineous mother

Place of study : in the labor ward at Teaching Hospital of Raja Rajeswari Medical College,Bangalore,

Period of Study:-During three years period of study (2008—2010) **Case Study :-**A male child was born to consanguoious mother in the labour ward of above institution with presence of coils of small intestines outside the body wall associated with jejunal atresia ,imperforate anus and club foot. The Scoliosis of spine (deformity of spine).was also present and other systems were normal. No other anomalies were found in this new born male baby. **Discussion:** Since this is a case of Multiple Congenital Anomaly (MCA), this case has been well compared,,correlated and discussed with the available literature of other cases showing multiple congenital anomalies showing gastrointestinal Anomalies like gastrochisis , amphalocele,atresia of any part of gastrintestinal tract,imperforate anus etc.

Conclusion:This is case of Gastroschisis associated with Multiple Congenital Anomalies (MCA) has not only profound embryological importance but also give profound knowledge of gastrochisis with multiple congenital anomalies of gastrointestinal tract to the Anatomists, Surgeons and Physicians . Hence this case has been studied well and reported

Keywords;-Gastroschisis,-- Abdominal wall defect .Paraomphalocele -Abdominoschisis—Laproschisis

INTRODUCTION

Gastroschisis is defect in the abdominal wall in the developing fetus during pregnancy by the formation of a hole in the abdominal wall through which allows intestine & other organs come out. These are not covered by any protective sac but exposed to amniotic fluid. Intestines may be shortened,twisted,swollen or may become irritated .Child may require surgery immediately after birth by pushing back the intestinal coils into the abdominal cavity Even after surgery child may have problem of feeding,

digestion & absorption of food.”According to the Center for disease control & prevention(CDC), around 1871 babies are born with gastrochisis every year in USA¹ . It has been stated by some authors that Gastroschisis occurs to the right of umbilicus & may be associated with Artesia of intestines (10%) .(Cincinnati children’s Hospital Medical center.).

Maternal History

This anomalous child was born normally to consanguoious mother after term in the middle

class family..This was third child to her & other two children (one male & a female child)were normal but they were born by caesarean sections There was history of hydramnios during this pregnancy & family history of consanguinity, but there was no history of taking drugs or infection during first trimester. No history of smoking & alcohol intake. No systemic diseases in the family.

METHODOLOGY

A live male child was born to consanguinous mother aged 23 years in the labor ward at Teaching Hospital of Raja Rajeswari Medical College,Bangalore.. Once the child was born, cried well , minimum muonium was present on the body .Baby was cleaned well and weighed. The weight of the .new born male child was 3.0.kg..There was no difficulty in respiration. All the systems were examined in detail and they were found to be normal except Gastro intestinal system & anterior abdominal wall..

On general examination

Head & neck – Normal,, Face – normal, Chest – normal Extremities :-Upper limbs were normal There were ten digits. with no anomalies of digits . Spine : Scoliosis of spine (deformity of spine).was present Lower limbs:-Normal but there was club foot(deformity of foot) of the right foot .left lower limb was normal with normal ten digits No polydactyly or syndactyly of both upper & lower limbs were found in this new born child.

Local examination of the abdomen

On the detailed examination, child had defect in the anterior abdominal wall. with coils of intestine lying outside the abdominal wall These were coils of small intestine were not covered by any protective membrane or sac There was part of stomach herniating The opening of aperture was quite large measuring approximately 5.5 cms . There was also associated anomalies like jujenal atresia ,imperforate anus. Scrotum was normal .Testes

were present in the scrotum.No other congenital inguinal or umbilical hernias were found. No anomaly of bladder or other pelvic organs..No other anomalies observed in this new born baby other than above anomalies. After examination was complete, photograph of anterior abdominal was taken.

DISCUSSION

The incidence of Gastroschisis in United States is 1 in 5000 infants. Cases of Gastroschisis are increasing world wide & in United States of America. This congenital disorder also has affected in infants having background of ethnic. These anomalies can be diagnosed by ultra sound also but exact etiology is not known in the fetus About 5 cms vertical opening is present in the abdominal wall adjacent to the umbilical cord Rarely large intestine along with other organs may be herniated through the opening New borns with gastrochisis are either have a low birth weight or prematurely born. They have associated anomalies like bowels which are underdeveloped or part of genetic syndrome or disorder Pregnant mothers have shown increase level of alpha fetoprotein in their blood due to presence of gastrochisis of fetus Mothers using recreational drugs in early period of pregnancy or smoke during pregnancy are highly prone for getting infants with Gastroschisis. ².

Mothers of younger age are likely to have babies with Gastroschisis & mothers of white teenagers have higher incidence of Gastroschisis infants than in Black or African –American teenagers³ Babies with Gastroschisis are found more in mothers who consume more of alcohol & use tobacco in the form of smoking⁴ Use of certain drugs like Ibuprofen during pregnancy carries high risk of delivering babies with gastrochisis & also in women who have repeated urinary tract infections before pregnancy or early part of pregnancy have high risk of delivering babies with Gastroschisis⁵

Yuvaraj Bhosale et al (2007) have reported a case of multiple congenital anomalies having Omphalocele,extrophy of cloaca with imperforate anus &,Spinal defects(OEIS-Complex) in a still birth full time fetus to non consanguineous mother of 21 years old. There was no history of drug intake nor infection in her first trimester. Antenatal ultra sonography revealed omphalocele associated with polyhydramnios, congenital dislocation of hip on both sides with calcaneo vulgus feet deformity ,imperforate anus,genital ridge was unfused & there was splitting of genital tubercle .Hence sex could not made out . There was also kyphosis of lumbar spine.⁶ In India Incidence of multiple congenital anomalies(MCA) is 1.94% - 2.03% as per the analysis of all published studies^{7&8}

According to I.C.Verma (1978), the commonly occurring multiple congenital anomalies are defects of neural tubes with anomalies of cardio vascular systems, or musculo-skeletal system ,& gastro intestinal systems⁹The causative factors of major multiple congenital anomaly is due to genetic factors (30%-40%)environmental factors (5%-10%).Among anomalies caused by genetic, chromosomal abnormality constitutes only 6% , disorders of single gene constitutes 25% & multifactorial constitutes 20-30% & cause of 50% of multiple congenital anomalies is idiopathic¹⁰. A study was conducted by Saarah Waller et al from 1987 to 2006 on all cases of live born infants with gastroschisis.They established a link between infants with gastroschisis and agricultural chemicals like atrazine ,nitrates,& 2,4dichlorophenoxyacetic acid .They found occurrences of gastroschisis was high due to contamination of water with atrazine Incidence of gastroschisis risk was also increased in a women who concieved in the spring that is between month of March, April & May due to more use of chemicals.during these months¹¹.

This is case of multiple congenital anomalies seen in full term new born male baby involving gastro intestinal system(showing gastroschisis, jejunal atresia imperforate anus,),skeletal system club foot(deformity of foot) & scoliosis of spine, (deformity of spine) and polyhydramnios, but there was no congenital dislocation of hip on both sides nor omphalocele as seen in studies of Yuvaraj Bhosale et al (2007) studies No incidences of neural tube defects, nor anomalies of cardiovascular systems unlike in studies of I.C.Verma (1978),

PRESENT STUDY

In present case, a full term male baby was born normally to 23 years old mother of Bangalore in labor ward at Teaching Hospital of Raja Rajeshwari Medical College, Bangalore, Karnataka with coils of intestine lying outside the Anterior Abdominal wall. These coils of small intestine were not covered by any membrane or sac. On close examination, there was part of stomach also herniating along with coils of intestine on close examination The opening of aperture was quite large(approximately 5.5cms wide),In this case, environmental factor has not played any role unlike in studies conducted by Sarah Waller et al

On examination of abdomen

Coils of intestine were moist with adequate blood supply,& there was atresia of jejunum. Stomach was just protruding. There were no other organs seen at opening of the anterior abdominal wall. There was associated anomaly of club foot(deformity of foot) & scoliosis of spine (deformity of spine). No anomaly of bladder & other pelvic organs It is second degree consanguinity, hydramnios, & past family history of anomalies which may be the contributing factors for the occurrence of the present anomaly of Gastroschisis. The immediate surgery was done on this child by placing all the coils of intestine & stomach back

into cavity of the abdomen & opening was closed in layers .Post operative period was uneventful Later child was shifted to Neonatal ICU.

CONCLUSION

It is the ultra sound that has played a prominent role in the diagnosis of anomalies in gestation period (antenatal period).Early diagnosis is of paramount importance to obstetrician to plan for further management. Anomalies found after birth also can be to treated either immediately after birth or after certain specified time This case of multiple congenital anomalies with gastrochisis as main anomaly gives knowledge of anomalies not only to Anatomists but to surgeons of all clinical branches & physicians This study of anomaly is of paramount importance to community medicine_in bringing down the incidences of morbidity & mortality of anomaly ,through Health workers ,social workers & volunteers ,and NGOs. ANOMALY committee or caell can be set to bring down incidences of Anomalies in coming years . Hence this case has been studied & reported.

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A CASE OF GASTROCHISIS SEEN IN NEW BORN MALE BABY BORN TO CONSANGUINOUS COUPLES

