ORIGINAL RESEARCH PAPER

Medical Science

KEY WORDS: Gastroschisis, CTEV (Congenital Talipes Equino Varus)

GASTROSCHISIS WITH CONGENITAL TALIPES EQUINO VARUS : A CASE REPORT

Priyanka Dhiman Postgraduate student Department of Anatomy, DRPGMC Tanda, Kangra H.P.

Suman Yadav* Professor & Head Department of Anatomy, DRPGMC Tanda, Kangra H.P. *Corresponding Author

ABSTRACT

Gastroschisis is a congenital abdominal wall defect. Its incidence has been increased up to 4-5 cases per 10000 live births. Gastroschisis has no covering sac and most of the infants with gastroschisis do not have any other anomalies and no associated syndromes. We are presenting a case of male fetus of 20 weeks with gastroschisis on right side of the umbilicus with congenital talipes equino varus in left foot. This study highlights the association of gastroschisis with CTEV.

INTRODUCTION

Gastroschisis is an abdominal wall defect which is present at birth characterised by herniation of abdominal viscera outside the abdominal cavity through a defect in the abdominal wall to the side of the umbilicus.[1] It is most common of the wall closure defects of the abdomen. The incidence of Gastroschisis has been increasing in recent year and has reached 4–5 cases per 10,000 for all live births.[2,3] Gastroschisis has no covering sac and most of the infants with gastroschisis do not have any other anomalies and no associated anomalies. This differentiates it from an omphalocele, which usually is covered by a membranous sac and more frequently is associated with other chromosomal and structural malformation.[4]

Cardiac and genitourinary abnormalities have been commonly associated [5,6,7,8,9,10] with gastroschisis as compare to extra-gastrointestinal anomalies. In the presented case, gastroschisis associated with congenital talipes equino varus has been reported. Congenital talipes equino varus comprises equinus, inversion of foot and adduction of the forefoot relative to the hind-foot.[11]

OBSERVATION

During routine fetal autopsy in pathology department in DR RPGMC Tanda, received a male fetus of 20 weeks gestational period, with crown rump length is 29cm, weight 6.17grams with unilateral talipes equino varus in left foot, with gastroschisis on right side of umbilicus. The content consists of loops of bowel without any sac. On deep dissection, rest of the organs were normal and found in their original position.

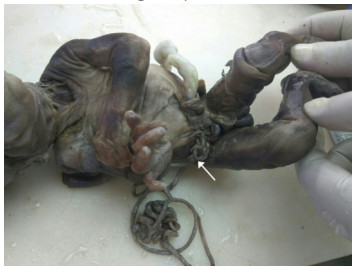

Fig.1: Gastroschisis on right side of umbilicus.

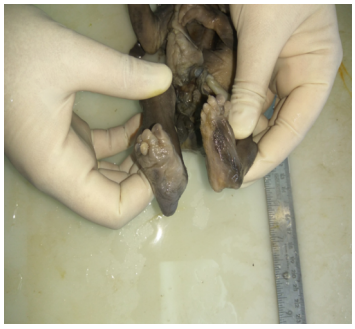

Fig 2: Left foot with talipes equino varus anomaly

Fig3: Shows the part of bowel below this arrow was outside the abdominal wall.

DISCUSSION

In most of the cases, gastroschisis is present without any associated defect.[12] In contrast, omphalocele is more likely to be associated with other major genetic or somatic anomalies. There is a low rate of concurrent malformations with gastroschisis, but a careful review on published data revealed the rates ranging from 5% to 27% of anomalies association with gastroschisis.[13]

In the study of Benjamin and Wilson [12], rate of associated anomalies with gastroschisis was 32%, including musculoskeletal anomalies which contributed 9.6%. Musculoskeletal abnormalities reported include limb reduction defects, clubfoot and skeletal dysplasia.[12] Mastroiacovo et al[14] found 2.2% incidence of associated limb anomalies with gastroschisis.

In the study of Stoll C et al. out of 86 patients with omphalocele, 64 (74.4%) had associated malformations and in 60 patients with gastroschisis, 10 (16.6%) had associated malformations.[15]

Singal R et al. reported a rare case of a newborn baby with an abdominal wall defect, together with multiple congenital abnormalities and diagnosed as gastroschisis. There were multiple defects found as spinal deformity, imperforate anus, esophageal fistula, and lower limb deformity (congenital talipes equinovarus) along with the webbing of neck.[16]

CONCLUSION

This case report highlights the association of congenital gastroschisis with congenital talipes equino varus. In case of

omphalocele, the long term outcome depends on its associated malformations, whereas the kids with gastroschisis usually achieve normal growth and development as they progress through childhood. There is no immediate interventions are needed in foot defects and are not fatal.

REFERENCES

1. Torfs CP, Velie EM, Oechsli FW, Bateson TF, Curry CJ. A population-based study of gastroschisis: demographic, pregnancy, and lifestyle risk factors. Teratology. 1994;50:44–53.
2. Ortega García J.A., Martín M., Brea Lamas A., de Paco-Matallana C., Ruiz Jiménez J.I., Soldin O.P. Integrating the environmental clinic history into prenatal counseling and health care in gastroschisis: 2 case reports. An. Pediatr. (Barc) 2010;72:215–219.
3. Holland A.J., Walker K., Badawi N. Gastroschisis: An update. Pediatr. Surg. Int. 2010;26:871–878. doi: 10.1007/s00383-010-2679-1.
4. Chabra S, Gleason CA. Gastroschisis: embryology, pathogenesis, epidemiology. NeoReviews. 2005;6:e493–9.
5. Bond SJ, Harrison MR, Filly RA. Severity of intestinal damage in gastroschisis: Correlation of prenatal sonographic findings. J Pediatr Surg. 1988;23:520–5.
6. Kirk EP, Wah R. Obstetric management of the fetus with omphalocele or gastroschisis: A review and report of one hundred twelve cases. Am J Obstet Gynecol. 1983;146:512–8.
7. Mayer T, Black R, Matlak ME, Johnson DG. Gastrochisis and omphalocele. An eight-year review. Ann Surg. 1980;192:783–7.
8. Paidas MJ, Crombleholme TM, Robertson FM. Prenatal diagnosis and management of the fetus with an abdominal wall defect. Semin Perinatol. 1994;18:196–214.
9. Redford DH, McNay MB, Whittle MJ. Gastrochisis and exomphalos: Precise diagnosis by midpregnancy ultrasound. Br J Obstet Gynaecol. 1985;92:54.
10. Sermer M, Benzie RJ, Pitson L, Carr M, Skidmore M. Perinatal diagnosis and management of congenital defects of the anterior abdominal wall. Am J Obstet Gynecol. 1987;156:308–12.
11. Ezeukwu AO, Maduagwu SM. Physiotherapy management of an infant with Bilateral Cogenital Talipes Equino varus. African Health Sciences. 2011; 11(3): 444-448.
12. Benjamin B, Wilson GN. Anomalies associated with gastroschisis and omphalocele: Analysis of 2825 cases from the Texas Birth Defects Registry. Journal of Paediatric Surgery 2014;49: 514 –519.
13. Akhtar J, Skarsgard ED. Associated malformations and the "hidden mortality" of gastroschisis. J Pediatr Surg 2012;47:911–6. 14. Mastroiacovo P, Lisi A, Castilla EE, et al. Gastroschisis and associated defects: an international study. Am J Med Genet A 2007;143:660 –71.
15. Stoll C, Alembik Y, Dott B, Roth MP. Omphalocele and gastroschisis and associated malformations. Am J Med Genet A. 2008;146A:1280–5.
16. Singal R, Garg LN, Singal RP, Gupta S, Shahi SR, Singal S, et al. Omphalocele and Gastroschisis Associated With Multiple Congenital Abnormalities. J Med Life. 2011;4:295–6.