



Case Report on Management of Pregnancy in a Patient with Small Muscular Ventricular Septal Defect

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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Case Report

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ABSTRACT

Introduction: Maternal morbidity and mortality during pregnancy is significantly associated with hypertensive disorders.

Patient history: A 33 years old female was admitted in AVBRH with chief complaint of breathing difficulty with G₂P₁A₁L₁ having 30 weeks of gestational age with previous LSCS and conception with small muscular ventricular septal defect, normal function and rhythm for the period of gestation.

Obstetric history: Patient had bad obstetric history of 1 induced abortion.

Clinical findings: The patient had undergone various investigations like blood tests, USG, Physical examination and antenatal per abdominal examination.

Medical Management: Patient was treated with calcium supplement and iron supplement.

Nursing management: Administered fluid replacement i.e. DNS and RL, Foetal monitoring, hourly vital sign monitoring.

Conclusion: Timely treatment of Ventricular Small Muscular Septal Defect and Management in pregnancy improved the outcome of pregnancy.

Keywords: Gestational age; LSCS; small muscular; septal ventricular defect; gestation.

1. INTRODUCTION

Ventricular Septal Defect (VSD) varies amongst neonates with cardiac defects. The recent increased prevalence of VSD among neonates can be attributed to improved diagnostic strategies and screening such as frequent use of fetal echocardiography [1]. Compared to the results of older studies, the reporting of VSD at birth have risen significantly, possibly due to advancements in screening. Recent technological advances in prenatal echocardiography have significantly improved the prenatal detection of VSDs. The prevalence and distribution of the different kinds of foetal VSD, however, is not well known, and further investigations are needed to properly evaluate the risk of postnatal and chromosomal CHD [2].

Among all the congenital defects, congenital heart disease (CHD) becomes the leading cause of mortality in child age groups. According to published reports, CHD has an incidence of 4 ; or 10 per 1,000 live births. A systematic review and meta-analysis study confirmed the occurrence of around 9.3/1,000 babies born in Asia. The variably reported rates of CHD among published studies are attributed to the difference in their inclusion criteria [3]. Septal ventricular defect (VSD) is a type of CHD which accounts for one third of all heart defects diagnosed during the first year of postnatal life, with a prevalence of 4 per 1000 live births. The prevalence of CHD is 13.08 per 1000 live births, according to a data base in Taiwan. VSD is the most common subtype of CHD in Taiwan, with prevalence per 1000 live births of 4.01 [4].

2. PATIENT INFORMATION

A 33 years old female was admitted in AVBR Hospital on date 20/01/2021 with chief complaint of breathing difficulty since last night, and blood pressure was high i.e. 150/100 mm/hg. After check-up, doctors diagnosed the case as G₂P₁A₁L₁ with 30 weeks of GA with previous LSCS and conception with small muscular ventricular septal defect with normal function and rhythm for the period of gestation.

Patient specific information: Patient had previous good obstetric history. Now she had 30 weeks gestation with small muscular ventricular septal defect, normal function and rhythm for the period of gestation.

Primary concerns and symptoms of the patient: Chief complaint was breathing difficulty since last night, and blood pressure was high i.e. 140/90 mm/hg.

Medical family and psychosocial history: Present case had no any medical history. She is belonged to nuclear family and her husband had medical history of Diabetes Mellitus. She was mentally stable, conscious and well-oriented. She was maintaining the good relationship with doctors and nurses as well as other patients also.

Relevant past interventions with outcomes: Present case had the bad obstetric history (abortion). After abortion, she took the treatment for regular menses and she was conceived.

Clinical findings: Present case was unhealthy, she was conscious and oriented to date, time and place. Her body built was moderate and she maintained good personal hygiene. Her blood pressure was high i.e. 140/90 mm/hg, pulse rate was slightly increased. On breast examination, breasts were enlarged, tender and bluish veins were visible. Nipple was large and erected. On abdomen inspection, stria gravidarum, linea nigra was present. Abdominal shape was cylindrical, abdominal girth was 94 cm and fundal height was 22 cm. In abdomen palpation, fundal grip showed hard rounded structure felt. In lateral grip, right anterior curve was felt i.e. spine and left lateral side, felt small globular mass i.e. extremities, lie was longitudinal. In Pawlick's grip-removable small smooth masses was felt. In pelvic grip small smooth masses was felt. Foetal heart sound was 160 beat/min. On vaginal examination, discharge was not seen, no signs of any uterine prolapse were seen.

Diagnostic assessment: Physical examination, abdominal palpation and USG findings confirmed 30 weeks of gestational age with small muscular ventricular septal defect, normal function and rhythm for the period of gestation. Singleton pregnancy with foetus corresponding to 860 gm. But foetal condition showed 1st stage of intra uterine growth restriction. Fasting blood sugar was normal. Haemoglobin was slightly decreased. Total WBC count was increased. No any challenges were faced during diagnostic evaluation.

Prognosis: Good.

Therapeutic intervention: Present case received the medical treatment with Tab. Estrabet 2 mg twice a day for maintaining estrogen hormone level, Tab. Sildenafil 25 mg P/V at bed time. She also received corticosteroid hormone tabs; and Tab. Calcium once a day for Calcium supplementation. No any changes in therapeutic intervention were reported.

Nursing perspectives: IV fluid was provided to maintain the fluid and electrolyte. Monitored foetal heart rate and vital signs per hourly.

3. DISCUSSION

This present case was admitted to the hospital with chief complaints of breathing difficulty and high blood pressure for further management (140/90mmhg). After the examination and diagnosis of gestational hypertension, she was given oestrogen hormone therapy and calcium supplementation. According to the ultrasonography test, the congenital anomaly was seen. A research shows that 0.4-1.5% of the population in general is affected by congenital heart defects (CHDs) [5].

A study reported association of maternal diseases during pregnancy with the risk of single ventricular septal defects in the offspring in a population-based case-control study of 1661 case in Hungary [6]. Another study reflected on correlation with antenatal care and antenatal counselling for congenital anomaly tests [7]. A number of studies on hypertension in pregnancy [8,9] and different types of complications in pregnancy [10-12] were reported. Few of the related studies on antenatal services [13] and heart problems [14,15] were reviewed [16-19].

4. CONCLUSION

The most prevalent CHD today is muscular ventricular septal defect. In contrast to the antenatal period findings, muscular ventricular septal defects are more prevalent. The outcomes of a pregnancy can be improved by prompt care and management.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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