



Case Report

Multi-Professional Collaboration for a Fetal Anomaly in an Adolescent Pregnancy: A Case Report

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Abstract

The proportion of adolescent pregnancies in Japan has remained at approximately 1.3%. We should consider for adolescent pregnancy poses many problems during the perinatal period. In the case of a young pregnant and unmarried woman, babycare support after birth is necessary due to the course of pregnancy. This case reports on the progress of support that was close to the pregnant woman and her family through multidisciplinary collaboration because the family refused to treat the baby after the fetal anomaly was pointed out by ultrasound.

Keywords: Adolescent pregnancy; Multiprofessional collaboration; Fetal anomaly

Introduction

As of 2019, there were an estimated 21 million pregnancies, of which approximately 50% were unplanned, each year among adolescents aged 15-19 years in low- and middle-income countries (LMICs), resulting in an estimated 12 million births [1-3]. In contrast, The proportion of adolescent pregnancies in Japan has remained at approximately 1.3% [4]. Adolescent pregnancy poses many problems during the perinatal period. Adolescent mothers (aged 10-19 years) face higher risks of eclampsia, puerperal endometritis, and systemic infections than women aged 20-24 years, and their babies face higher risks of low birth weight, preterm birth, and severe neonatal conditions [4]. Additionally, Chen et al. reported an adolescent pregnancy increases the risk of congenital anomalies of the central nervous, gastrointestinal, musculoskeletal, and musculoskeletal/integumental systems 2007 [5].

Case Presentation

In the case of pregnant and unmarried adolescent women, childcare support after childbirth is necessary because of the course of pregnancy. We report on the progress of a pregnancy and the support received by the pregnant's woman and her family through multi-professional collaboration as the family refused to treat the baby after a fetal anomaly was identified by medical images.

Herein, we report the case of a 19-year-old woman, Gravida 1 Para 0, with an unplanned pregnancy and no contact with the other part or father.

She underwent a prenatal checkup by a previus clinic. She was referred for an ultrasound examination of fetal cephalic lateral ventricle enlargement at 31 + 3 weeks. Ultrasound findings which shows Biparietal diameter of the fetal head (BPD) 89.3 mm (+3.1 SD); Abdominal circumference (AC,) 231.9 mm (-1.4 SD); and Fumur length (FL), 52.0 mm (-1.5 SD). Also, we suspected fetal microcephaly, thoracic hypoplasia, limb deformity, and scoliosis (Figure 1). She was admitted to our hospital with threatened

premature labor at 32 +0 weeks. Osteogenesis imperfecta and chromosomal abnormalities were inferred from the imaging studies. Chromosome testing was not performed at the request of the patient and her family. Immediately after admission, the patient was questioned about fetal abnormalities and medical expenses and was interviewed by an in-hospital medical social worker. Five interviews in total were conducted. The family's concerns included the patient and child's medical expenses and the burden of childcare on the family. Before her delivery, she showed a willingness to care for her child and even accepted visits from her public health nurse. Regarding her postnatal care, we provided information and requested cooperation from the Comprehensive Support Center for Child-rearing Generations to prevent treatment neglect of the child.

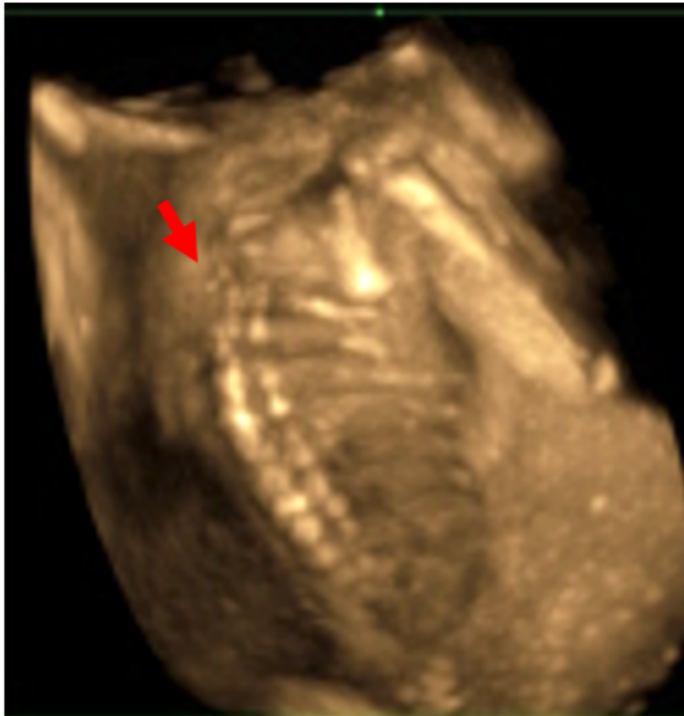


Figure 1: 3D/4D ultrasound image of the fetus at 31 + 3 weeks: The red arrow indicates spin was curved and irregularly formatted. We suspected the fetal thoracic hypoplasia, limb deformity, and scoliosis.

At 37 + 4 weeks, fetal macrocephaly (BPD, 100.3 mm) and difficult delivery due to spinal curvature were predicted, and a cesarean section was performed with the consent of the patient and her family. After intubation, the child was admitted to the neonatal

intensive care unit. The infant was male, weighing 2232 g. Apgar score was 1 point at 1 min and 3 points at 5 min.

Physical examination revealed a heart rate of 171 beats/min, a respiratory rate of 58 beats/min, and an SpO₂ of 61%. Results of peripheral blood gas analysis showed a pH of 6.80 and BE of -17.0. A chromosome test showed 46XY. The infant passed away 9 hour after birth due to respiratory failure. Autopsy imaging revealed bilateral atelectasis, scoliosis, and flexion of both hands and feet (Figure 2). Autopsy was not performed. The postnatal diagnosis was suspicious for osteogenesis imperfecta. Ultimately, the patient wished to spend time with her child until she was discharged.

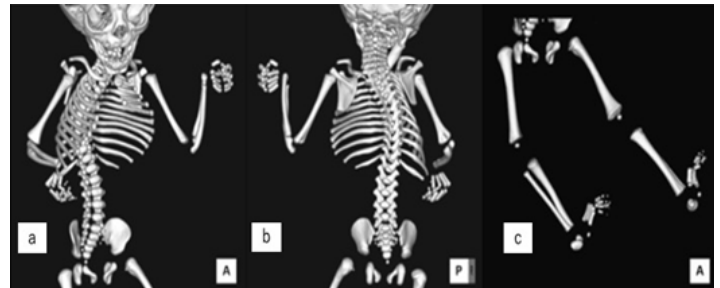


Figure 2: Autopsy images of the dead baby: a: Anterior view of upper body, b: Posterior view of upper body, c: Anterior view of lower body. It shows skeletal abnormalities such as ribcage, vertebral bodies and limbs.

Discussion

Current status and issues of sex education leads to perinatal problems related to unwanted pregnancies among young people. Furthermore, the behavior of pregnant women's fathers who refuse to have an abortion or infant treatment has a psychological impact on young pregnant women. After repeated interviews with the patient, family, doctors, midwives, and the medical social workers (MSW), we inferred that it was difficult for the father to accept the child when he learned that he might have a bone system disease and there was potential for child abuse after discharge from our hospital. Therefore, we included a network of multi-professional collaborations that support adolescent pregnant women with their families. After observing the family's change in perspective and how they became positive to the prospect of child-rearing, we realized how important it is to offer support and coordinate with centers that may be able to help. Figure 3 shows our network of multi-professional collaborations system. The interviews were also important to help explain medical care, costs, and child care in this case.

Key informant interviews

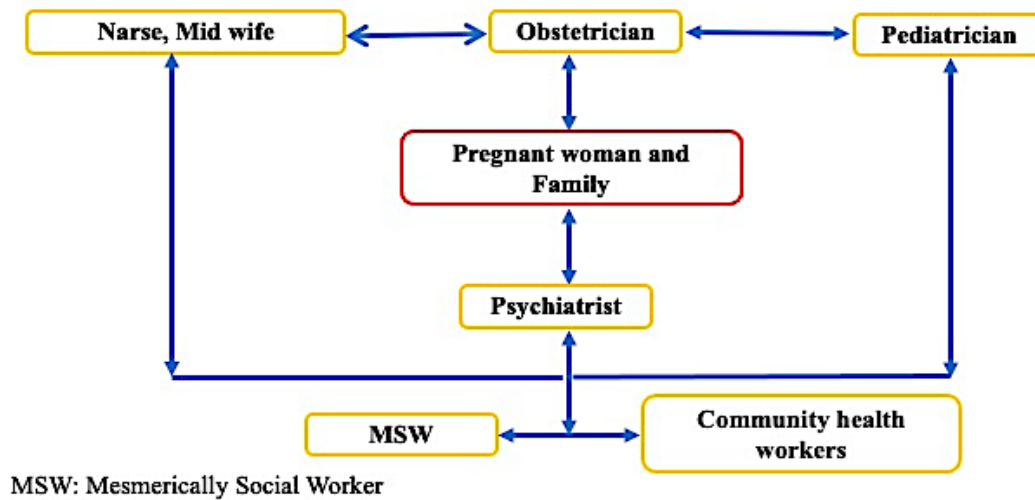


Figure 3: Multi-professional collaborations system: We built support for high-risk pregnant women including families with community health workers.

Based on our experience in this case, it is important to conduct activities and raise awareness about sexual health among youth to prevent unplanned pregnancies. Based on our experience in this case, it is important to conduct activities and raise awareness about sexual health among youth to prevent unplanned pregnancies. What we can do now is activities and education to prevent unwanted pregnancies among young people. However, we listen closely to the person and his/her family, listen them, solve the problem, and I realized that it would lead to support. The mechanisms of the fetal anomaly in order to teenage pregnancy, there may be some biological reasons why teenage mothers are at increased risk of congenital anomalies [6] Chen said that there are also several other possible explanations [5]. First, the early initiation of prenatal care could lead to an increased number of terminations due to the early identification of congenital anomalies [7]. Other factors suspected of playing a role in the etiology of some congenital anomalies such as poor diet, illicit drug use, and smoking are more prevalent in teenage pregnancies than in adult pregnancies [7]. Some lifestyle and education-related factors are associated with an increased risk of congenital anomalies in adolescent pregnancy. If teenage mothers get adequate prenatal care, have a healthy diet, avoid exposure to smoke, alcohol, and drugs and take a timely multivitamin and folic acid supplements, some of these congenital anomalies may be prevented [6]. The findings of this study have a significant public health impact. The American College of Obstetricians and Gynecologists recommends that healthcare providers screen for depression and anxiety using a standardized tool at least once during pregnancy in 2015 [8].

At last, the World Health Organization (WHO) said preventing pregnancy among adolescents and pregnancy-related imperative for achieving the Sustainable Development Goals (SDGs) related to maternal and newborn health. And Adolescent pregnancy is a global phenomenon with clearly known causes and serious health, social and economic consequences to individuals, families, and communities. There is consensus on the evidence-based actions needed to prevent it. There is growing global, regional, and national commitment to preventing child marriage and adolescent pregnancy, and childbearing. Nongovernmental organizations have led the effort in several countries. In a growing number of countries, governments are taking the lead to put in place large-scale programs. They challenge and inspire other countries to do what is doable and urgently needs to be done – now. We believe that the declining birth rate is accelerating in Japan. Among them, sex education and child-rearing education from adolescence are economically important issues, and I expect that correct education will lead to healthy pregnancy and child-rearing.

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Disclosure of interests:

All author report no conflict of interest related to our manuscript.

Ethics approval:

Informed consent was obtained from the patient.

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