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10.4103/pjog.pjog_39_23

Dilemmas and management of a pregnant 10-year-old sexual assault victim

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Abstract:

There has been a dramatic increase in very young adolescent pregnancies in recent years, with pregnancies documented in children as young as 10 years old, likely from sexual abuse. This article presents a 10-year-old female who initially consulted at the emergency room in her 27th week of pregnancy as a result of recurrent sexual abuse. Prompt assessment, diagnosis, and appropriate referrals to Obstetrics, Pediatric Adolescent Clinic, Psychiatry, and Child Protection Unit rendered optimal management for the patient. Dilemmas encountered in managing the case included preterm labor, large-for-gestational-age baby, immature pelvis, and approach to the appropriate mode of delivery compounded with management of trauma from sexual abuse. A multidisciplinary approach in managing these dilemmas achieved optimal outcomes with the patient delivering a live baby boy, appropriate for gestational age via cesarean section at term.

Keywords:

Child abuse, pregnancy in adolescence, preteen pregnancy, teenage pregnancy, sexual

Introduction

Very young adolescents (VYAs), defined as individuals from 10 to 14 years old, are at a critical stage where foundations for proper view of sexuality and reproductive health are still being established. Concurrently however, sexual abuse among this age group has become a major global public health problem.^[1]

A recent report by the Young Adult Fertility and Sexuality Study accounted for a 50% decline in teenage pregnancies aged 15–19 years from 2013 to 2021.^[2] This is congruent with the reported 37% decline in the same age group from 2017 to 2022 by the Philippine Statistics Authority.^[3] However, despite this apparent decrease in teenage pregnancies, a growing concern has emerged in the VYAs with a dramatic increase in

pregnancy rates in the 10–14-year-old age group from 1381 documented pregnancies in 2011 to 2250 cases in 2018, displaying a 63% rise within this 7-year period. The Commission on Population and Development of the Philippines also reported that of this number, only 64 were fathered by boys 15 years of age or younger, and around 50 cases of these pregnancies are in 10-year-old children, most likely from sexual abuse and rape.^[4]

This increase in number of pregnant VYAs has raised alarms to study this population in order to back up Congress in creating policies that may prevent further pregnancies in this age group. Evidence-based guidelines may be warranted to further aid legislative bodies in creating ordinances needed to protect and help these children reclaim opportunities lost from their total being and development and have a greater chance to be productive members of the community.^[2]

In line with this, this article discusses a case of a 10-year-old sexual abuse pregnant

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How to cite this article: Valera-Defensor PG, Martinez-Bucu ME. Dilemmas and management of a pregnant 10-year-old sexual assault victim. *Philipp J Obstet Gynecol* 2023;47:88-92.

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Submitted: 08-Jun-2023

Revised: 12-Jun-2023

Accepted: 22-Jun-2023

Published: 17-Aug-2023

patient with its concomitant dilemmas and respective management.

Case Presentation

A 10-year-old female consulted at the emergency room as a case of sexual abuse referred by their local social worker. Her mother initially observed progressive abdominal enlargement prompting consult with a local physician. Detailed history taking and careful assessment of the patient led to disclosure of sexual assault by her aunt's partner on multiple occasions for over a year.

The patient had no known comorbidities. She had complete vaccinations, with a measles–mumps–rubella vaccine inadvertently given during her 1st month of pregnancy. Her developmental history was at par with age. Her thelarche was at 7 years old and menarche at 8 years old.

On initial assessment, the patient had stable vital signs. She was 148 cm tall with a weight of 50 kg. Breast development was at Tanner Stage 4 and pubic hair was at Tanner Stage 3. On abdominal examination, fundic height was 28 cm and estimated fetal weight was 0.8–1.0 kg with good fetal heart tones. On internal examination, a clinically contracted pelvis was noted with the anteroposterior diameter measuring 10 cm, prominent ischial spines, and convergent pelvic sidewalls.

A baseline abdominal ultrasound revealed a single live intrauterine pregnancy in cephalic presentation with good cardiac and somatic activity. She was 28 weeks and 5 days by composite sonar aging with sonographic estimated fetal weight appropriate for gestational age. Other prenatal laboratory results were normal.

The diagnosis at this time was: pregnancy uterine 28 weeks and 5 days age of gestation by late ultrasound, cephalic not in labor; disclosure of child sexual abuse. She was given prophylactic antibiotics for sexually transmitted diseases in the form of ceftriaxone 250 mg intramuscularly, azithromycin 500 mg, and metronidazole 1 g orally and prescribed prenatal vitamins. She was advised follow-up at the outpatient department by the Obstetric, Pediatric, and Psychiatric services as well as the Child Protection Unit of the hospital.

Her consequent consults at the outpatient department comprised obstetric follow-ups at the High-Risk Pregnancy Clinic, family conferences and psychosocial therapy by the Psychiatry service, and teen-mom training by the Pediatric Adolescent services. The medicolegal aspects of her case were handled by the Child Protection Unit.

At the 34th week of pregnancy, a congenital anomaly scan was done showing no gross structural abnormalities in the fetus but with an estimated fetal weight sonographically above the 90th percentile. Premature contractions were also noted, and on internal examination, her cervix was one centimeter dilated. She was subsequently admitted for control of preterm labor and close monitoring.

On admission, dexamethasone 6 mg was administered intramuscularly every 12 h for four doses for fetal lung maturity. Nifedipine 30 mg loading dose orally followed by 20 mg every 6 h was given for tocolysis. She was given micronized progesterone 200 mg capsules intravaginally once daily. Her daily prenatal vitamins were continued.

A multidisciplinary conference was held regarding the goals of management for the case. Several key dilemmas regarding delivery were identified:

1. Shall labor and vaginal delivery be allowed with the foreknowledge of a large-for-gestational-age baby and an immature pelvis granted a background of a traumatizing event of recurrent sexual abuse?
2. Shall an outright cesarean section be offered even without any obstetric indication on an immature, untested pelvis?

Two options were presented to the patient and her parents, as summarized in Table 1. First was the option of a trial of labor for vaginal delivery with its advantage of faster recovery and healing time. The possibility of undergoing cesarean section for obstetric indications during labor, such as dysfunctional labor or nonreassuring fetal status, was explained adequately to the patient and her parents. The second option was outright cesarean section with the advantage of eliminating the additional trauma of labor on the patient who was still recovering from the trauma of sexual abuse. The corresponding disadvantages would be the need to undergo surgery and the resulting postoperative abdominal scar together with the relatively longer healing and recovery time compared to a vaginal birth.

Table 1: Summary table of options presented to the patient and her family with advantages and disadvantages

Trial of labor for vaginal delivery		Outright cesarean section	
Advantages	Disadvantages	Advantages	Disadvantages
Normal physiologic process	Still with possibility of cesarean section such as for dystocia and nonreassuring fetal status	Eliminate further trauma of labor on pediatric sexually abused patient	Surgical in nature Postoperative scar Longer healing and recovery time
Faster recovery time			

The patient and her parents consented for outright cesarean section at term. A multidisciplinary conference was held to discuss preparations for the planned cesarean section.

At the 37th week of pregnancy, the patient went into active labor. The primary low-segment cesarean section was carried out under general anesthesia to prevent further traumatic experiences from intraoperative awareness at a young age and for easier patient cooperation. She delivered a live baby boy, 3200 g, appropriate for gestational age with an APGAR score of 9 remaining 9 with an unremarkable operative course.

Prior to discharge, a family conference with the Psychiatry service was rendered. Maternal care and breastfeeding training were provided by the Pediatric Adolescent service. Proper wound care and hygiene were also emphasized by the Obstetrics team. The patient was discharged well together with her baby under her parents' supervision with adequate safety and security ensured by the Child Protection Unit in coordination with the Department of Social Welfare and Development.

On immediate follow-up after 1 week, the patient's wound was dry and well coaptated and she continued breastfeeding. The patient and her family had continued psychotherapy sessions and family counseling. One year postoperatively, the patient was well with no subjective complaints. She continued her formal education and was active in social activities among peers. She still continued scheduled follow-ups with the Psychiatry service. The assailant was detained under police study.

Discussion

Pregnancy complications

VYAs present with a higher risk for preterm birth, small for gestational age, low birth weight, and newborn mortality.^[5] In a study by Zhang *et al.*, Chinese women aged 10–19 years had a higher risk of preterm delivery, small for gestational age, stillbirth, and neonatal death than their adult counterparts.^[6] With these known complications, adolescent pregnancies are categorized into high-risk pregnancies and have been recommended to be managed accordingly by institutions with programs that have the capacity to handle their care and their unique physical risks.^[7]

Preterm labor in young adolescents may be attributed to the irritability of an immature adolescent uterus, a sensitivity to dehydration, and an altered hormonal milieu.^[8] The index patient presented with preterm labor on her 34th week which prompted further investigation and admission. Prompt workup and timely intervention

with tocolysis and progesterone therapy was completed and the preterm labor was successfully controlled.

Several theories have been proposed regarding the link between low birth weight babies born to adolescent mothers. The first relates to uterine immaturity in adolescent mothers and their inability to accommodate a deeply invading placenta. This capacity occurs further into the female's biological life through repetitive menstrual cycles to evolve vascular adaptation for pregnancy, which is quantitatively inadequate in adolescents.^[9] Second is the role of nutrition and its vital role in adequate weight gain for fetuses. The growth and nutritional requirements of the growing adolescent mother are postulated to compete for nutrients required by the gravid uterus.^[10] However, the index patient presented with a baby sonographically above the 90th percentile at her 34th week. Although common for VYA pregnancies to present with small for gestational age babies, the contrasting presentation of the patient may possibly be explained by the direct correlation of maternal growth corresponding to fetal growth in otherwise healthy adolescents. In a study of 368 adolescent pregnancies in the United Kingdom, patients with large-for-gestational-age babies or those at the >90th percentile comprised 23% of their population. It was noted that greater weight gain and fat accrual in these healthy-growing teenagers appeared to support fetal growth, highlighting that adequate maternal nutritional supports both maternal and fetal growth during pregnancy.^[11] The adequate access to health care and consequent follow-ups by the patient in a multidisciplinary center providing adequate management may have aided to ensure that the complications of preterm birth and a low birth weight baby were abated.

Delivery

A major dilemma in the management of this case was whether to let the patient go into labor granted she had an immature pelvis together with the presentation of a large-for-gestational-age baby. Pelvic examination of the patient revealed a doubtful pelvis with the anteroposterior diameter at only 10 cm, prominent ischial spines, and convergent pelvic sidewalls, possibly relating to its immaturity. These findings together with the presentation of a large-for-gestational-age baby were components in decision-making for her mode of delivery.

The female human pelvis undergoes a separate trajectory of development from that of the male at infancy but is most pronounced at puberty at around 10–12 years old. At around 15–25 years of age, which also corresponds to the age of highest fertility, the female sacrum and the ischiopubic region undergo eversion while the iliac blades undergo inversion. This results in larger

anteroposterior and transverse diameters of the pelvic midplane and pelvic outlet as well as larger transverse dimensions of the pelvic inlet and pelvic outlet. The subpubic angle and the angle of the greater sciatic notch also become wider, and the bi-iliac width becomes narrower.^[12] The female pelvis becomes fully mature at 15–25 years, which is the age of highest fertility, to accommodate labor and delivery.

Zhang *et al.* enumerated risks in VYA pregnancies. Their results found that the rate of cesarean delivery in these pregnancies was lower than their adult counterparts.^[6] The authors theorize that the preterm delivery and lower fetal weight in these mothers were made it conducive for vaginal delivery despite their immature pelvic development. Torvie *et al.* also echo these similar findings of lower risk of both cesarean and operative deliveries in VYA mothers 11–14 years of age compared to adults ages 20–24 years. Although their findings do not clarify mechanisms on this lower risk, their findings also do not support the substantially increased occurrence of cephalopelvic disproportion or dystocia in this age group.^[13] Further studies were recommended to elucidate the underlying mechanisms explaining these findings. However, these physiological components may also be compounded with other vital factors in the decision-making for mode of delivery.

Psychological trauma

The physiological complications brought about by her age at pregnancy may be further amplified by the psychosocial trauma of sexual abuse. Labor itself is characterized by forceful and painful uterine contractions that result to cervical dilation and cause the fetus to descend through the birth canal. Although labor itself is a physiologic process, it may reactivate sexual trauma in women who have experienced rape. In a series of semi-structured interviews of 10 women exposed to rape prior to their first childbirth, Halvorsen *et al.* reported that the main theme for these women was being back in the rape. Among the internal struggles during labor were identifying the rapist and birth attendant to switch roles as main actors due to their similar authoritarian nature and even the touching of intimate parts and placing into specific positions as invasive and similar to that of being held captive. Furthermore, procedures such as vaginal examinations to monitor progress in labor were tied to their experiences of the violent vaginal penetration during the rape.^[14] Hence, it is imperative for birthing teams to create a safe atmosphere for these women, ensuring minimal disturbances that may preclude to the rape. In the management of the index case, a detailed briefing with the entire team was carried out prior to delivery to ensure that everyone was guided regarding the sensitive nature of the case and to make the patient's labor and birthing experience as comfortable as possible.

At the time of literature review, clinical guidelines have yet to be written for elective cesarean sections for psychiatric indications or for traumatic events such as rape in VYAs. However, it seems prudent to proceed with an individual approach in such cases when discussing eventual mode of delivery. During discussion with the patient and her parents, an analytical approach was utilized detailing the pros and cons for each mode of delivery [Table 1]. This process also ensured that, together with the entire team, the patient and her parents were actively involved in the decision-making of the case.

Multidisciplinary approach

Adolescent-centered multidisciplinary comprehensive care is the gold standard in treating adolescent pregnant patients, which aims to reduce maternal and neonatal complications at delivery. A facility equipped with providing this multidisciplinary team approach is necessary to provide optimal management and address the multifaceted needs of these patients.^[9] The high-risk nature of the patient's pregnancy with the corresponding screening for obstetric complications, testing for sexually transmitted infections, ultrasonographic assessments, and nutritional assessments were provided for by the Obstetric team. Developmental and medical considerations such as routine screening for alcohol, substance and violence in pregnancy, postpartum care programs, support groups for adolescent mothers, mothers' knowledge in parenting, and screening for postpartum depression were provided for by the Pediatric Adolescent team. The counseling for safe prenatal care including emotional, educational, and clinical support especially regarding the psychological trauma associated with the sexual abuse, which affected not only the patient but her entire family, was addressed by the Psychiatric service. Lastly, the medicolegal needs in terms of correspondences with the social welfare service, provision of medicolegal advice, and police communication were provided for by the Child Protection Unit. The multidisciplinary approach provided to the patient and her family ultimately resulted in optimal outcomes.

Conclusion

VYA pregnant patients are a vulnerable population which should prompt a high index of suspicion for sexual abuse. These patients should be considered high-risk pregnancies due in part to their increased risk of preterm birth and low birth weight among other possible neonatal complications. Other complications during labor and delivery may be in part due to the adolescent's underdeveloped and immature uterine and pelvic physiology. In addition to possible physiologic dilemmas, the compounding effect of psychosocial trauma from sexual abuse during labor and delivery

should be taken into consideration, especially when making decisions regarding the mode of delivery in these patients. A multidisciplinary approach in managing such cases is optimal in handling such cases to achieve the best patient outcomes.

Consent

Consent was secured from both the patient and her parents, with anonymity ensured.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the legal guardian has given consent for images and other clinical information to be reported in the journal. The guardian understands that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Acknowledgment

The authors would like to acknowledge the Philippine General Hospital's Department of Obstetrics and Gynecology, Department of Pediatrics, Department of Psychiatry, and Child Protection Unit for the management of this case.

Authorship contributions

Pamela Grace V. Valera-Defensor - involved in conceptualization, methodology, investigation, data curation, writing original draft, reviewing and editing of the final draft.

Mikaela Erlinda G. Martinez-Bucu - involved in conceptualization, methodology, investigation, writing of the original draft, reviewing and editing of the final draft.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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