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Case Report

Late Antenatal Booking in Advanced Maternal Age Pregnancy with Suspected Fetal Abnormality and Medico-Legal Considerations

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Abstract

Advanced maternal age is associated with increased maternal and fetal risks and warrants timely antenatal assessment. A 37-year-old gravida 7 para 4+2 woman first booked for antenatal care at 22 weeks and 3 days of gestation, after the optimal first-trimester screening period. Prenatal screening and diagnostic options for fetal chromosomal abnormality were discussed and offered at booking, but the patient declined because she considered that the result would not change her decision to continue the pregnancy at that gestation. Specialist assessment subsequently showed a small-for-gestational-age fetus with polyhydramnios, followed by persistent fetal growth restriction with normal doppler findings. At 34 weeks, she developed hypertension with 2+ proteinuria and was managed as pre-eclampsia; concern regarding an underlying chromosomal abnormality was also documented. At 36 weeks and 6 days, emergency caesarean delivery was performed for breech presentation in labour. The 1.47-kg neonate had dysmorphic features suggestive of a severe congenital or chromosomal disorder and died on day 7 without cytogenetic confirmation. The case highlights how early prenatal assessment may provide a wider timeframe for diagnostic clarification, counselling, and consideration of pregnancy-management options, including lawful termination where Malaysian statutory criteria are fulfilled.

Keywords: *Advanced Maternal Age; Antenatal Care; Fetal Abnormalities; Prenatal Diagnosis; Reproductive Counseling*

Introduction

Advanced Maternal Age (AMA), commonly defined as pregnancy at 35 years or older, is associated with increased risks of fetal aneuploidy, hypertensive disorders, fetal growth restriction, stillbirth, and other adverse perinatal outcomes (American College of Obstetricians and Gynecologists' Committee on Clinical Consensus-Obstetrics & Society for Maternal-Fetal Medicine, 2023; Saccone *et al*., 2022). Early antenatal engagement is important for pregnancy dating, maternal risk assessment, fetal evaluation, and counselling regarding prenatal screening (American College of Obstetricians and Gynecologists' Committee on Clinical Consensus-Obstetrics & Society for Maternal-Fetal Medicine, 2023).

The 11- to 14-week ultrasound examination provides an opportunity for early assessment of fetal anatomy and aneuploidy risk (International Society of Ultrasound in Obstetrics and Gynecology *et al*., 2023). Cell-free DNA (cfDNA) screening is currently the most sensitive and specific screening test for common fetal aneuploidies, while definitive prenatal diagnosis requires invasive testing such as chorionic villus sampling or amniocentesis (Navaratnam & Alfirevic, 2022; Society for Maternal-Fetal Medicine *et al*., 2025). Patients may accept or decline prenatal genetic screening and diagnostic testing after appropriate counselling (Society for Maternal-Fetal Medicine *et al.,* 2025).

The importance of prenatal diagnosis extends beyond establishing a fetal diagnosis. Timing may influence the opportunity for prognostic counselling, parental preparation, and consideration of pregnancy-management options. In Malaysia, these decisions also intersect with the legal framework governing termination of pregnancy and, for Muslim patients, relevant religious considerations (Ismail *et al*., 2023; Mohamad Shariff *et al*., 2025). This case describes an AMA pregnancy with late antenatal booking, subsequent fetal growth abnormalities, informed refusal of later prenatal testing, and suspected severe congenital or chromosomal abnormality. The discussion focuses on the timing of diagnosis and reproductive counselling within the Malaysian medico-legal context rather than attributing the outcome solely to late booking.

Case Presentation

A 37-year-old gravida 7 para 4+2 woman first presented for antenatal care at 22 weeks and 3 days of gestation. The reason for late antenatal booking was not recorded in the antenatal notes. Her menstrual cycles were regular and she was not using contraception before conception. Her obstetric history included two complete first-trimester miscarriages at approximately 8 weeks in 2013 and 2014, and a previous preterm low-birth-weight delivery at 34 weeks in 2019. Her booking body mass index was 28.9 kg/m^2. Modified oral glucose tolerance testing was performed twice during pregnancy and both results were normal. No contributory family or genetic history was recorded.

At booking, an approximately 10-day discrepancy was noted between gestational assessment and the expected dates. She was referred for obstetric assessment to exclude incorrect dating or fetal growth restriction. At approximately 24 weeks, specialist obstetric review was performed and the existing estimated date of delivery was maintained.

At 29 weeks and 5 days, she was referred to maternal-fetal medicine services because of polyhydramnios with concern for fetal growth restriction. The specialist impression was a small-for-gestational-age fetus with polyhydramnios. At 32 weeks and 5 days, persistent fetal growth restriction was documented, while Doppler assessment was reported as normal.

At the booking assessment at 22 weeks and 3 days, prenatal screening and diagnostic options for fetal chromosomal abnormalities, including cfDNA screening and invasive diagnostic testing, were discussed and offered. The patient declined further testing because she considered that identification of a fetal abnormality at the advanced gestation would not change her decision to continue the pregnancy.

At 34 weeks, the patient developed hypertension with 2+ proteinuria and was managed as pre-eclampsia. Other available hematological, renal, and hepatic parameters were reported as normal. Persistent fetal growth restriction remained present, and the clinical team documented concern that an underlying chromosomal abnormality might be contributing to the fetal findings. She was admitted for maternal and fetal monitoring, completed antenatal dexamethasone for fetal lung maturation, and received oral labetalol temporarily. Labetalol was stopped after one day because her blood pressure remained well controlled during admission. Following discharge, alternate-day blood-pressure monitoring and weekly medical review were planned. Delivery was planned at 37 weeks.

At 36 weeks and 6 days, she presented in labour with breech presentation and underwent emergency lower-segment caesarean section. A live female infant weighing 1.47 kg was delivered. Postnatal examination showed dysmorphic features raising clinical concern for a severe congenital or chromosomal disorder. Trisomy 18 was considered clinically, but cytogenetic confirmation was not obtained. The neonate died on day 7 of life. Postnatal cytogenetic confirmation was not pursued

because establishing a specific chromosomal diagnosis at that stage was not expected to alter neonatal management or outcome. Detailed individual dysmorphic features, neonatal investigations, treatment course, and specific cause of death were not recorded in the clinical notes.

Table 1: Clinical Timeline

Gestational age / time	Clinical event	Key findings / action
22+3 weeks	First antenatal booking	AMA; first-trimester screening period had passed; approximately 10-day dating discrepancy.
22+3 weeks (at booking)	Prenatal counselling	Screening (cfDNA) and invasive diagnostic options discussed and offered; patient declined as results were not expected to alter pregnancy continuation.
24 weeks	Specialist obstetric review	Pregnancy dating reviewed; existing EDD maintained.
29+5 weeks	Maternal-fetal medicine review	Small-for-gestational-age fetus with polyhydramnios.
32+5 weeks	Serial fetal assessment	Persistent FGR; Doppler assessment reported as normal.
34 weeks	Admission and specialist assessment	Hypertension with 2+ proteinuria; managed as pre-eclampsia; persistent FGR; concern regarding underlying chromosomal abnormality.
36+6 weeks	Labour and delivery	Breech in labour; emergency caesarean section; female infant, 1.47 kg.
Neonatal period	Postnatal assessment	Dysmorphic features suggestive of severe congenital/chromosomal disorder; no cytogenetic confirmation.
Day 7	Outcome	Neonatal death.

Patient Perspective and Decision-Making

Following counselling regarding available prenatal assessment, the patient declined further aneuploidy screening and invasive diagnostic testing because she considered that establishing a fetal abnormality at that gestation would not change her decision to continue the pregnancy. This preference is important in interpreting the absence of a definitive prenatal diagnosis and distinguishes informed refusal from failure to offer later diagnostic assessment. Decisions following the diagnosis of a congenital anomaly are preference-sensitive and benefit from clear, non-directive counselling (Pecoriello *et al*., 2024). A direct first-person patient narrative was not available; this section therefore reflects the documented counselling and decision-making in the clinical records.

Patient Consent

Written informed consent for publication of the de-identified maternal and neonatal clinical information contained in this case report was obtained from the mother. The key clinical learning point is that late booking does not remove later testing options, but it may shorten the time available for diagnostic clarification and legally informed reproductive counselling.

Discussion

The main lesson from this case is not that late antenatal booking inevitably prevented prenatal diagnosis. At 22 weeks and 3 days, the patient had passed the optimal first-trimester screening period, but later fetal screening and diagnostic testing remained possible. These options were offered at the booking assessment and declined. The relevance of earlier booking is therefore that it could have provided a

wider timeframe for screening, diagnostic clarification, and informed reproductive decision-making rather than being the sole determinant of whether a fetal abnormality could be diagnosed.

This distinction is important in AMA pregnancy. The risk of fetal aneuploidy increases with maternal age, and contemporary recommendations support offering prenatal genetic screening and diagnostic testing following appropriate counselling (American College of Obstetricians and Gynecologists' Committee on Clinical Consensus-Obstetrics & Society for Maternal-Fetal Medicine, 2023; Society for Maternal-Fetal Medicine *et al*., 2025). The patient's decision not to proceed with later testing should therefore be understood as an informed reproductive choice after counselling, not as evidence that all diagnostic opportunities were absent.

The timing of prenatal diagnosis is particularly relevant within Malaysian law. Section 312 of the Penal Code generally criminalizes voluntarily causing miscarriage but provides an exception for a registered medical practitioner who, acting in good faith, considers that continuation of pregnancy would involve greater risk to the woman's life or injury to her physical or mental health than termination (Kuek, 2022; Mohamad Shariff *et al*., 2025). Severe fetal abnormality is not, by itself, an independent statutory indication for termination. However, the consequences of a severe fetal diagnosis may be relevant when the clinician assesses its effect on the woman's physical or mental health (Kuek, 2022).

This legal framework gives the timing of prenatal diagnosis additional clinical significance. Earlier identification of a severe fetal abnormality would not automatically make termination lawful, and it cannot be assumed that this patient would have chosen termination. Earlier diagnosis could, however, have allowed more time for diagnostic confirmation, prognostic counselling, assessment of maternal physical and psychological consequences, and consideration of all legally available pregnancy-management options. These options include continuation of pregnancy with preparation for delivery and neonatal care, or therapeutic termination where the statutory requirements of Section 312 are fulfilled.

Prenatal diagnosis also has potential medico-legal implications. Kuek (2022) and Mohamad Shariff *et al*. (2025) discuss how failure to provide appropriate prenatal diagnosis and counselling may, in selected circumstances, deprive a woman of an opportunity to consider a lawful termination and may raise questions concerning wrongful-birth claims. The present case does not establish prenatal negligence or a wrongful-birth claim because later fetal screening and diagnostic assessment were offered and the patient elected not to proceed. Rather, the case illustrates why counselling and the patient's decision should be clearly documented when fetal abnormality is suspected.

For Muslim patients, religious considerations may also influence reproductive decision-making but should be distinguished from Malaysian criminal law. Islamic literature discussing fetal anomaly commonly treats 120 days as an important threshold while also considering the severity and prognosis of the fetal condition, potential harm to the mother, and specialist medical assessment (Ismail *et al*., 2023; Shoaib, 2024). These religious considerations do not create an automatic legal indication for termination in Malaysia. Legal permissibility, medical indication, patient preference, and religious acceptability remain separate considerations that should be addressed during counselling.

The present case therefore illustrates a reduced window for earlier diagnostic clarification and reproductive counselling rather than a complete loss of later testing. Earlier assessment could have provided more time to consider the implications of a diagnosis and the full range of pregnancy-management options within the applicable clinical, legal, and religious frameworks. This is especially relevant because the patient declined further investigation at booking on the basis that a diagnosis at the advanced gestation would not alter continuation of the pregnancy.

The fetal findings in this case were not diagnostic of a specific syndrome. A small-for-gestational-age fetus with polyhydramnios was identified at 29 weeks and 5 days, followed by persistent FGR and later clinical concern for an underlying chromosomal abnormality. Postnatal dysmorphism increased this concern, but the absence of cytogenetic confirmation prevents attribution to trisomy 18 or another specific chromosomal condition.

From a clinical perspective, the combination of fetal growth restriction with polyhydramnios is an ultrasound pattern that should raise suspicion of an underlying aneuploidy or genetic syndrome, because growth restriction caused by placental insufficiency is more typically accompanied by reduced amniotic fluid. In this case, the normal Doppler findings further suggested that placental insufficiency alone was a less likely explanation. Recognition of this pattern should prompt timely specialist referral, renewed counselling about diagnostic testing, and early planning for delivery and neonatal care, even when an earlier offer of testing has been declined.

Earlier diagnosis also cannot be assumed to have altered the mode of delivery or neonatal outcome. Emergency caesarean section was performed because the patient presented in labour with breech presentation. It would therefore be inappropriate to describe the procedure as preventable based on the suspected fetal condition. The more defensible implication is that earlier diagnostic clarification could have provided additional time for counselling regarding prognosis, delivery planning, neonatal goals of care, and lawful reproductive options.

From a primary-care perspective, the case reinforces two responsibilities: encouraging women with AMA to engage with antenatal care early and ensuring that abnormalities emerging later in pregnancy trigger appropriate reassessment and counselling. Early booking maximizes the opportunity for time-sensitive first-trimester assessment, while continuity of care ensures that later findings are appropriately evaluated and that patients can make informed decisions throughout pregnancy.

The patient's obstetric history was also relevant to risk assessment. Two previous first-trimester miscarriages and a previous preterm low-birth-weight delivery, together with AMA and high parity, identified a pregnancy at increased obstetric risk that would have benefited from early booking and planned specialist review. A previous preterm birth is an established risk factor for recurrent preterm birth, and a previous low-birth-weight infant may indicate an increased risk of impaired fetal growth, supporting closer surveillance of fetal growth from early pregnancy. These features are not specific markers of fetal chromosomal abnormality and were not interpreted as evidence of the suspected diagnosis in the current pregnancy. Nevertheless, such a history in an older multiparous woman should be identified in primary care as a reason to encourage early booking and prompt referral.

Limitations

This case has several limitations. No cytogenetic, molecular, or post-mortem confirmation was obtained; therefore, no specific chromosomal syndrome can be established. Postnatal cytogenetic confirmation was not pursued because establishing a specific chromosomal diagnosis at that stage was not expected to alter neonatal management or outcome. However, the absence of a confirmed diagnosis also limits counselling regarding recurrence risk in future pregnancies, which is relevant given the patient's age and parity. Hypertension with 2+ proteinuria was documented and the patient was managed as pre-eclampsia; other available hematological, renal, and hepatic parameters were reported as normal. Detailed neonatal phenotypic findings, investigations, treatment course, and specific cause of death were also not documented. These limitations prevent conclusions regarding the specific fetal diagnosis or whether earlier diagnosis would have changed maternal or neonatal outcomes.

Future Scope

Future research should explore barriers to early antenatal booking among women of advanced maternal age in Malaysia and evaluate approaches to improving timely fetal assessment and informed decision-making. Further studies should assess culturally sensitive counselling, access to genetic diagnosis, and psychological support for families following suspected fetal abnormalities or neonatal loss.

Conclusion

This case highlights the importance of early antenatal engagement in advanced maternal age pregnancy while recognizing that late booking does not eliminate later prenatal screening or diagnostic options. Earlier assessment provides a wider timeframe for diagnostic clarification, prognostic counselling, and informed consideration of pregnancy-management options. In Malaysia, suspected

severe fetal abnormality should prompt counselling that clearly distinguishes fetal diagnosis, patient preference, and the statutory criteria governing therapeutic termination. Earlier diagnosis does not automatically justify termination and cannot be assumed to alter obstetric or neonatal outcomes, but it may provide patients and clinicians with more time to consider all clinically and legally appropriate options.

CRediT Authorship Contribution Statement

K.B.K.: Conceptualization, investigation, data curation, writing - original draft, writing - review and editing, Supervision. **H.H.B.H.:** Conceptualization, investigation, data curation, writing - original draft, writing - review and editing, project administration. **N.B.N.:** Investigation, data curation, writing - original draft. **D.S.B.A.:** Investigation, data curation, writing - original draft. **D.B.S.:** Investigation, data curation, writing - original draft.

AI Assistance Declaration

The author hereby declares that, during the preparation of this manuscript, generative AI tools such as ChatGPT, Microsoft Copilot, and Google Gemini were utilized to assist with language enhancement and grammar correction. Following the use of these tools, the author thoroughly reviewed and revised the content and takes full responsibility for the final version of the manuscript, ensuring its accuracy and adherence to the required academic standards.

Conflict of Interest

The authors declare that they have no conflicts of interest.

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The authors thank the patient for providing written consent for publication of the de-identified clinical information in this case report.

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