Medical termination of unplanned pregnancies in women with diabetes

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Abstract

Women living with diabetes may experience unplanned pregnancies. This poses challenges and risk to both maternal and foetal health in case glycaemia and other associated comorbidities are not optimized. This may lead to doubts regarding continuation of pregnancy, given there are no clear guidelines or position statement for decision regarding termination or continuation of pregnancy. Multiple biomedical, psychosocial and environmental factors determine the course and outcome of such pregnancies. In such situations, a comprehensive analysis of foeto maternal health helps inform the antenatal woman, so that the right decision can be made, in a person-centred manner. This review proposes various algorithms to assist in shared decision making, including a 2x2x2 rubric (Psychosocial: statutory (legal), system-specific; emotional, economic; Biomedical: obstetric, offspring health; medical, metabolic health). No single biochemical value should be taken as an indication for termination of pregnancy, unless the foetus is incompatible with life.

Keywords: Congenital malformations, diabetes, medical termination of pregnancy, obstetric health, pregnancy

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Introduction

The term 'unplanned pregnancy' refers to a pregnancy which the woman concerned did not plan at this point in her life.[1] In the context of women living with diabetes, unplanned pregnancy is one in which conception occurs without prior, or pre-conception, optimization of metabolic, medical, psychological and social health. Unplanned pregnancy can be associated with significant health risks to both mother and foetus. This is especially true for women with uncontrolled diabetes, who may also be taking potentially teratogenic drugs, and may have associated comorbidities and complications.

Unplanned pregnancy is common across the world. The United Nations Population Fund estimates that half of all pregnancies worldwide are unplanned.[1] In South Asia, this figure is reported to be about 25%.[2] It must be noted here that all unplanned pregnancies are not unwanted: in fact, in the South Asian context, conception is usually welcomed as a gift of God.

The best means of preventing an unplanned pregnancy is counselling[3] and contraception. More often than not, however, women present in varying stages of gestation, without having sought, or offered, preconception counselling and health optimization.[4] In such cases, the woman, her family and the health care professional are faced with a clinical and ethical dilemma: to continue the pregnancy or terminate it. This opinion piece offers a pragmatic approach towards resolving this therapeutic confusion.

The 2x2x2 Framework

We use a 2x2x2 rubric (Figure) to summarize all the determinants of shared decision making. Both psychosocial and biomedical aspects of health should be taken into consideration while deciding whether to continue or terminate a pregnancy.

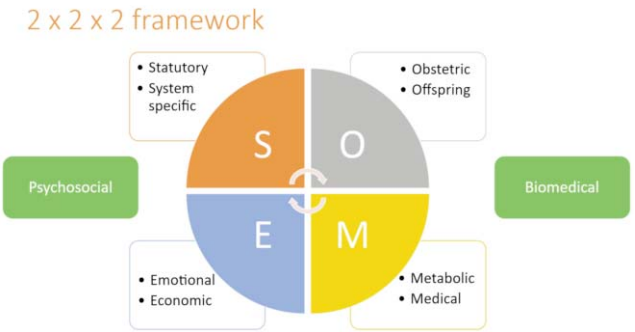

Figure: Facets of decision making in unplanned pregnancies

Psychosocial Facets

The psychosocial aspects include statutory (or legal) rules, which must be followed strictly, and system-specific realities, which should be kept in mind. Various countries allow medical termination of pregnancy, for varying

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indications, till different durations of pregnancy, on the advice of one or more qualified medical professionals. However, 26 countries impose a total prohibition on abortion with no mitigating circumstances.[5] These laws must be respected. The availability, accessibility and affordability of obstetric, medical and neonatal care, as well as diagnostic facilities, also influences the confidence of the treating team in continuing pregnancy. Non-availability of tertiary maternal and neonatal care may preclude continuation of a high-risk unplanned pregnancy complicated by poorly controlled diabetes.

Two more psychosocial aspects: emotional/social health, and economic status, impact decision making. The psychological health of the antenatal woman and her family, the social support that she enjoys, as well societal pressure to deliver a baby have a bearing on her final choice. Moreover, certain religious institutions may also prohibit medical termination of pregnancy on religious grounds. The family must also be made aware of the financial implications of a pregnancy complicated by diabetes, especially in a pay from pocket market.[6,7]

Biomedical Facets

The biomedical features of an unplanned pregnancy have a major bearing on outcomes, and therefore, on choice of options. The obstetric history, including fecundity and fertility, as well as past history of maternal and neonatal complications, allow one to anticipate future challenges. The presence, or otherwise, of children, healthy or with congenital malformations, also informs preferences.

Most important, from a physician's or endocrinologist's perspective, is medical and metabolic status. Poor glycaemic control is associated with unwanted complications, including congenital malformations.[8,9] However, there is no single HbA1c value that can be used as a threshold for advising medical terminal of pregnancy. The decision should be taken based on other parameters, including maternal age, duration of diabetes, macro-and micro-vascular health, as well as presence of other comorbidities.

Another important consideration is the degree of exposure to potentially teratogenic drugs, including oral glucose-lowering drugs, antihypertensives and lipid lowering medications. The risk of worsening of nephropathy and retinopathy should also be taken into consideration, as should other facets of maternal health.

Surveillance For Informed Decision Making

It is not always necessary, and many a times may not be feasible, to decide regarding continuation of pregnancy in one visit. it may be prudent to explain the situation to the woman, institute standard of care, and allow her to come to an informed decision.

Investigation may be ordered, based upon the gestation period, to facilitate this decision. A viability scan, early anomaly scan, and growth scans help in monitoring foetal viability, and growth. Foetal echocardiography may be advised in high risk patients. While all antenatal women must be clearly informed about the law, Women presenting in first trimester should be counseled that the mode of termination of pregnancy may change as the gestation progresses.

Table-1: AEIOUx2 conversation plan regarding pregnancy.

- Assess and analyze health status
- Explain risk and resilience
- Inquire about psychosocial health
- Offer various options
- Understand opinions of all stakeholders
- Arrive at course of action
- Explain plan and procedure
- Initiate and monitor therapy
- Open to change as far as possible
- Uber services and motivation

Table -2: Decision Regarding Continuation Of Unplanned Pregnancy Complicated By Diabetes.

Aspect of health	Points that can favour continuation of pregnancy	Decision may be difficult at times	Points that may not favour continuation of pregnancy
Fertility and fecundity	Low		High
Societal pressure	High		Low
Psychological resilience	High		Low
HbA1c	< 8.5%		> 10 %
Use of contraindicated drugs	None	Few	Multiple
Microvascular health	Good	Early retinopathy, nephropathy	Advanced retinopathy, neuropathy
Macrovascular health	Good	Hypertension	Established atherosclerotic cardiovascular disease
Foetal health	Optimal	Borderline growth trajectory	e/o malformation incompatible with life; high risk of neural tube defect

We suggest an AEIOU x2 algorithm (Table 1) which helps shape unplanned pregnancy. We strongly emphasize the need for complete and comprehensive documentation at every step of care. Table 2 lists the factors that inform decision making, and suggest a simple manner to aid in patient counseling. We reinforce that no single biochemical value can be used to advise termination of pregnancy, unless the pregnancy is incompatible with life.

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References

1. Bearak JM, Popinchalk A, Beavin C, Ganatra B, Moller AB, Tunçalp Ö, et al. Country-specific estimates of unintended pregnancy and abortion incidence: a global comparative analysis of levels in 2015–2019. BMJ global health. 2022;7: e007151.
2. Singh A, Chakrabarty M, Singh A, Singh S, Chandra R, Tripathi P. Spatial heterogeneity in unintended pregnancy and its determinants in India. BMC Pregnancy and Childbirth. 2024;24:670.
3. Imai RY, Monteagudo PT, Mattar R, Dib SA, Dualib PM, de Almeida-Pititto B. Inadequate pregnancy planning in diabetics, and its impact on glycemic control and complications. Arch. Gynecol. Obstet. 2023;308:1229-38.
4. Ferry P, Dunne FP, Meagher C, Lennon R, Egan AM, Newman C. Attendance at pre-pregnancy care clinics for women with type 1 diabetes: A scoping review. Diabet Med.. 2023;40: e15014.
5. Allotey P, Ravindran TS, Sathivelu V. Trends in abortion policies in low-and middle-income countries. Annu. Rev. Public Health. 2021;42:505-18.
6. Bajaj S, Jawad F, Islam N, Mahtab H, Bhattarai J, Shrestha D, et al. South Asian women with diabetes: psychosocial challenges and management: consensus statement. Indian J Endocrinol Metab. 2013;17:548-62.
7. Kalra B, Balhara YP, Kalra S. Psychosocial aspects of diabetes in pregnancy. JOSH Diabetes. 2014;2:025-9.
8. Nakanishi K, Kanagawa T, Fujikawa K, Ishii K, Waguri M. Congenital malformation and hemoglobin A1c in the first trimester among Japanese women with pregestational diabetes. J Obstet Gynaecol Res. 2021;47:4164-70.
9. Bapayeva G, Terzic S, Dotlic J, Togyzbayeva K, Bugibaeva U, Mustafinova M, et al. Pregnancy outcomes in women with diabetes mellitus–the impact of diabetes type and treatment. Menopause Rev/Przegląd Menopauzalny. 2022;21:37-46.