

Diabetes care and transgender health: Clinical pearls

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Abstract

Diabetes and other cardiometabolic diseases occur across the world, and do not discriminate between populations. This communication reviews the epidemiology and etiology of diabetes in the transgender population, and highlights clinical issues that must be kept in mind while evaluating and managing the condition. It adds value to existing literature by equipping health care professionals with specific skills designed to enhance diabetes care delivery, and results, in transgender individuals.

Keywords: diabetes, genital tract infections, insulin resistance, metabolic syndrome, SGLT2i, transgender

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Introduction

Transgender health care is a vast and complex field, in which the role of multidisciplinary team work is well established. Gender-affirming hormonal intervention (GAHI) is thought to be the endocrinologist's domain, and rightfully so.¹ However, there are other facets of endocrine and metabolic health which need to be addressed as well.² One of these is the management of diabetes.

Epidemiology

It has been thought that GAHI may lead to an increase in the risk of diabetes in transgender individuals, especially transwomen on estrogen therapy. Data from the STRONG cohort of USA suggests that transwomen have a greater risk of diabetes than in women, but this risk is not increased when compared to cis men.³ The Amsterdam cohort from the Netherlands reports no increase in the incidence of diabetes among transmen and women, however.⁴

Transgender youth have an increased risk of developing type 1 diabetes, however. Data from the USA reveals a prevalence of 9.9/1000 in trans-youth, as compared with 1.93/1000 in cis-gender youth.⁵ A Belgian study, too, has highlighted a 2.3-fold higher occurrence of type 1 diabetes in trans-youth.⁶

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Table: Etiopathogenetic factors contributing to diabetes, and poor diabetes control, on transgender persons.

Biomedical

- Polycystic ovary syndrome in transmen
- Weight gain associated with gender affirmative hormonal interventions
- Insulin resistance due to
 - Exogenous estrogen therapy
 - Smoking, alcohol abuse
 - Anti-retroviral therapy
 - Psychotropic therapy

Psychological

- Gender minority distress
- Associated psychological/psychiatric issues

Social

- Fear of transphobia
- Poor access to health care

Explanation

Multiple reasons have been put forward to explain the relationship between diabetes and transgender status. Table uses the biopsychosocial model to enlist these possible causes. This means that we must offer biopsychosocially reinforced care, without undue fear, albeit with necessary caution.

Diagnosis

Diagnosis of diabetes may be delayed in transgender persons because of suboptimal access to the health care system, and/or trans-unfriendly or transphobic experiences. Transgender health care providers should incorporate screening for diabetes in annual preventive health care checkups.²

Opportunistic screening should also be offered proactively to persons initiating GAHI, as well as those presenting with sexually transmitted infections, and those reporting a change in concomitant therapy such as psychotropic medication or antiretroviral therapy.

Evaluation and Intervention

Screening, diagnostic and monitoring protocols remain the same in trans-gender and cis-gender populations, as do choice of therapeutic regimens and preparations. However, there are a few features that need to be highlighted in the context of transgender diabetes medicine.

Differential Diagnosis

There may be significant overlap between symptoms of diabetes and gender dysphoria, as well as their

complications. Hypoglycaemia, acute panic attack, hot flashes, transient ischaemic attacks and unstable angina may present with similar symptoms. The astute clinician should be able to discriminate between these, and other conditions. Misdiagnosis may lead to inappropriate investigations and treatment.

Genito-Urinary Health

Transgender persons are at a higher risk of urinary and genital tract infections. This assumes greater importance for the diabetes care provider, as SGLT2i (sodium/glucose cotransporter-2 inhibitors), now considered first line therapy, are associated with a greater risk of such infections.⁷ The health care provider must take a history regarding organ inventory, and presence of balanoposthitis or pruritis vulvae, in a sensitive and empathic manner.

Vascular Complications

Apart from diabetes, transgender persons are at higher risk of obesity. This, in part, is due to GAHI in transmen, and to limited trans-friendly options for exercise and sports. Both obesity and diabetes are associated with macrovascular complications and comorbidities. Data from the STRONG and Amsterdam cohorts reveal that macrovascular disease and stroke occur more frequently in transgender individuals). An added vascular risk is that of venous thromboembolism in transwomen on estrogen.⁸

Obesity and fluid overload may occur in persons on GAHI, and this should be evaluated prior to initiating pioglitazone. Pioglitazone may also increase the risk of fractures, and should be avoided in transgender persons at risk of, or with established osteoporosis.

Cardiovigilance and metabolic vigilance are required in all transgender persons. GAHI should be initiated only if diabetes, blood pressure and lipids are reasonably controlled. These parameters should be reassessed annually, or earlier if there is any change, or anticipation of change, in clinical condition or status. Cardiovascular risk assessment can also be done by using ethno-specific tools such as QRisk.³ As there are no tools specifically meant for trans-individuals, it would be prudent to plan therapy based on the higher risk, i.e., risk for cis-men, in both transgenders.

Bone Health

Bone health is an important part of overall endocrine management, and must be optimized. Supplemental calcium and vitamin D should be offered as per standard of care. The high prevalence of vitamin D insufficiency in South Asia suggest that both transmen and women should receive regular supplements. The risk of fracture can be calculated using the FRAX tool. As there is no category for

trans gender individuals, again, it is pragmatic to calculate one's risk using the gender at higher risk, i.e., female.

Insulin Administration

Insulin administration in public may be a challenge for some transgender persons, who face issues related to body image and self-esteem. Such persons can be counselled and explained about the various sites for insulin injection. Diabulimia is an eating disorder which occurs in persons with type 1 diabetes. These patients miss insulin on purpose to reduce weight. A careful history should be taken, and appropriate interventions offered if needed.

Prudence and Pragmatism

Metabolic screening i.e., metabolic vigilance, should be integrated in transgender health² As things stand, the transgender individual has to seek care from multiple health care providers, often in different locations. Care for diabetes, and associated cardiometabolic conditions, can easily be provided by the same professional who initiates and supervises GAHI. Metabolic vigilance should include not only the "metabolic quadriga" (diabetes, hypertension, dyslipidaemia and obesity), but other variables like anaemia, prophylaxis for venous thromboembolism, and sexual health issues.

While metabolic vigilance is a laudable aim,⁹ it cannot accomplish its aim of bettering health without appropriate communication and action. Diabetes care is highly dependent upon communication. Therapy by the ear is an integral part of diabetes management. This is true for transgender health as well, which requires a high degree of empathy in communication.¹⁰ When transgender care and diabetes care intersect, the need for such communication increases. All members of the health care team should emphasize the need for metabolic screening and optimization, as a part of transgender health care, rather than as a separate vertical of health care. The responsibility of the individual, in terms of seeking appropriate treatment, and sharing required information (e.g., exposure to sexually transmitted disease, genital or urinary symptoms) must also be emphasized.

Summary

As we focus on comprehensive care of the transgender individual, we should include diabetes management, and metabolic medicine, in its ambit. Transgender individuals represent a high-risk group for the development of diabetes and some of its complications. Their unique needs and challenges must be kept in mind while planning management strategies for them.

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