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LETTER TO THE EDITOR

Importance of etiologies of secondary diabetes: How often do we think off in clinical practice?

Kotha Sugunakar Reddy, Arvind Kumar Morya, Archana Gaur, Sakthivadivel Varatharajan

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Abstract

The article "Secondary diabetes due to different etiologies: Four case reports" by Song *et al*, published in the *World Journal of Clinical Cases*, delves into the identification of rare causes of secondary diabetes and emphasizes the necessity for healthcare professionals to recognize these conditions. Failure to do so can result in treatment delays and compromised patient outcomes. The article discusses specific types of diabetes, including maturity onset of diabetes in young, pancreas-related diseases, endocrinopathies, drug-induced diabetes, infections, and congenital genetic syndromes associated with diabetes mellitus. Case summaries highlight how patients with secondary diabetes, stemming from conditions such as Williams-Beuren syndrome and pituitary adenoma, often exhibit distinct characteristics overlooked in clinical practice. The authors stress the importance of a holistic diagnostic approach and advocate for proactive management through early intervention, including genetic tests and antibody detection. Increased awareness and education are crucial for timely identification and proper management, ultimately improving patient well-being. These findings prompt a call to action for healthcare professionals to consider rare causes of secondary diabetes, facilitating better glycemic control and overall patient care.

Key Words: Diabetes mellitus; Etiologies; Viral infections; Syndromes; Pathophysiology, Secondary diabetes mellitus, Clinical practice

Core Tip: The pathophysiology behind the origin of secondary diabetes mellitus (DM) is quite intricating. It is seen in many syndromes, drug-induced and commonly prevalent viral-infections. To know the etiology of secondary DM is of paramount importance for its proper management.

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TO THE EDITOR

We read with great interest the recently published article entitled "Secondary diabetes due to different etiologies: Four case reports" authored by Song *et al*[1], and published in the *World Journal of Clinical Cases*. We would like to extend our congratulations and sincere appreciation to the authors for their contribution in presenting these cases as insightful case reports focusing on the etiology of one of the most common endocrine disorders encountered in day-to-day clinical practice[1].

The article sheds light on the complexities of diabetes classification and the identification of rare causes of secondary diabetes, addressing an issue of paramount importance in healthcare - the misdiagnosis and underdiagnosis of secondary diabetes. Given the negligible incidence and prevalence of secondary diabetes mellitus compared to type 2 and type 1 diabetes mellitus, it is crucial for healthcare professionals to recognize the underlying pathology of diabetes while treating patients[2].

The findings highlighted in the article emphasize the critical necessity for healthcare professionals to acknowledge the existence of special types of diabetes that are often missed by conventional diagnostic methods. Failure to consider rare causes of secondary diabetes can lead to treatment delays and increased healthcare costs, ultimately compromising patient outcomes[2,3].

With knowledge background of existing literature, Diabetes mellitus is broadly classified into type 1, type 2, and gestational diabetes. There are other specific types of diabetes where there are genetic defects of beta cell function with single gene defects grouped into maturity onset of diabetes in young (MODY), even genetic defects in insulin action resulting in diabetes mellitus are type A insulin resistance, leprechaunism, Rabson-Mendenhall syndrome, and lipoatrophic diabetes The findings highlighted in the article emphasize the critical necessity for healthcare professionals to acknowledge the existence of special types of diabetes that often missed by conventional diagnostic methods Diabetes mellitus can also be a component of various endocrinopathies, such as acromegaly, Cushing's syndrome, glucagonoma, pheochromocytoma, hyperthyroidism, somatostatinoma, and aldosteronoma, which can induce insulin resistance through an increase in counter-regulatory hormones[4-7].

Various drugs are implicated in deranging the blood glucose metabolism like pentamidine, nicotinic acid, glucocorticoids, thyroid hormones, diazoxide, beta adrenergic agonists, thiazides, atypical antipsychotics, alpha interferons[7,8].

Infections with certain viruses like rubella, cytomegalovirus, enterovirus, hepatitis C virus, human immunodeficiency virus and coronavirus disease 2019 are implicated in pathogenesis of secondary diabetes mellitus either by destroying beta cell mass due to infection or inducing autoimmunity towards pancreatic cells[7,8].

A number of congenital genetic syndromes are associated with diabetes mellitus like down syndrome, Klinefelter syndrome, turner syndrome, wolfram syndrome, Friedrich ataxia, Huntington disease, Laurence-moon-Biedl syndrome, porphyria, myotonic dystrophy, Prader Willi syndrome[8,9].

A newer subset of class of diabetes mellitus called hybrid diabetes or double diabetes where patients having both characteristics of type 1 and type 2 diabetes, and it is often missed in diagnosis Malnutrition related diabetes has been proposed in many tropical countries like India, southeast Asia, and African countries. Malnutrition and protein deficiency are the most common features. Although the proposed mechanisms are not proven yet most thought process is the protein malnutrition makes patient vulnerable to toxic or immune induced destruction of pancreas[8,9].

Of particular concern is the tendency to overlook cases that deviate from the typical progression of diabetes. The study's case summaries vividly illustrate how individuals with secondary diabetes, caused by conditions such as Williams-Beuren syndrome, Prader-Willi syndrome, pituitary adenoma, and IgG4-related diseases, exhibit distinct characteristics that are often neglected in clinical practice[8,9].

We wish to extend my appreciation to the authors representing various specialties involved in the management of the four cases outlined in this report. It highlights the significance of a holistic approach in diagnosing and evaluating patients. Collaborative efforts frequently surpass the constraints of a single specialty approach, reducing the likelihood of missed diagnoses or suboptimal management.

The structure and systematic detailing of all four case reports are commendable. However, we believe that presenting each case in its entirety at a single point, followed by separate presentations of the remaining cases, would have enhanced comprehension and grasp of the material. Detailing long-term management strategies, including therapy adjustments, monitoring, and patient outcomes, would give readers a clearer understanding of how secondary diabetes is managed over time.

The conclusion drawn by the study is clear: Proactive and efficient management through early diagnosis and intervention is paramount in improving patient outcomes. It is imperative for healthcare professionals to conduct genetic tests, antibody detection, and other appropriate diagnostic measures to accurately identify the underlying causes of secondary diabetes. The inclusion of more specific recommendations based on these cases would have strengthened the rigor of this study.

By addressing the primary conditions causing secondary diabetes, such as excising pituitary adenomas, providing glucocorticoid supplementation, and implementing symptomatic treatments, patients can experience a significant decrease in blood glucose levels and an improvement in accompanying symptoms[8,9].

Given these findings, we encourage healthcare professionals to incorporate the consideration of rare causes of secondary diabetes into their diagnostic approach, while extending our gratitude to the authors for enriching existing knowledge. Increased awareness and education surrounding these conditions are essential to facilitate timely identification and appropriate management, ultimately leading to better glycemic control and overall patient well-being. Even though in regular clinical practice subjecting patients to all the investigation is not cost effective way for evaluation, but consideration of secondary causes of diabetes in the back of mind while dealing with patients requiring unusually higher levels of insulin and oral hypoglycemic drugs with impaired sugars, and patients with pertaining history and findings in general physical examination will definitely guide us and prompt us for evaluation in that direction to look out for secondary causes.

We hope that the insights provided by this study will prompt positive changes in clinical practice and contribute to the proactive and efficient management of secondary diabetes.

FOOTNOTES

Author contributions: Morya AK and Varatharajan S designed the study; Reddy KS wrote the manuscript; Gaur A and Morya AK edited it and finally submitted by Morya AK.

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REFERENCES

1 **Song WR**, Xu XH, Li J, Yu J, Li YX. Secondary diabetes due to different etiologies: Four case reports. *World J Clin Cases* 2024; **12**: 2813-2821 [PMID: 38899290 DOI: 10.12998/wjcc.v12.i16.2813]
2 **American Diabetes Association**. Diagnosis and classification of diabetes mellitus. *Diabetes Care* 2009; **32** Suppl 1: S62-S67 [PMID: 19118289 DOI: 10.2337/dc09-S062]
3 **Meier JJ**, Giese A. Diabetes associated with pancreatic diseases. *Curr Opin Gastroenterol* 2015; **31**: 400-406 [PMID: 26125315 DOI: 10.1097/MOG.0000000000000199]
4 **Popoviciu MS**, Paduraru L, Nutas RM, Ujoc AM, Yahya G, Metwally K, Cavalu S. Diabetes Mellitus Secondary to Endocrine Diseases: An Update of Diagnostic and Treatment Particularities. *Int J Mol Sci* 2023; **24** [PMID: 37628857 DOI: 10.3390/ijms241612676]
5 **Rajsfus BF**, Mohana-Borges R, Allonso D. Diabetogenic viruses: linking viruses to diabetes mellitus. *Heliyon* 2023; **9**: e15021 [PMID: 37064445 DOI: 10.1016/j.heliyon.2023.e15021]
6 **Wood A**, Abreu D, Clark A, Malbas M, Sprague J, Mcgill J. 8: Genetic Syndromes Associated with Diabetes. Atypical Diabetes: Pathophysiology, Clinical Presentations, and Treatment Options 2018 [DOI: 10.2337/9781580406666.08]
7 **Khawandanah J**. Double or hybrid diabetes: A systematic review on disease prevalence, characteristics and risk factors. *Nutr Diabetes* 2019; **9**: 33 [PMID: 31685799 DOI: 10.1038/s41387-019-0101-1]
8 **Haftu H**, Gebrearegay H, Berhane A. Malnutrition-Modulated Diabetes Mellitus in Children, Rare Disease with Atypical Presentation: Case Report. *Diabetes Metab Syndr Obes* 2020; **13**: 3069-3074 [PMID: 32922057 DOI: 10.2147/DMSO.S263229]
9 **Barbot M**, Ceccato F, Scaroni C. Diabetes Mellitus Secondary to Cushing's Disease. *Front Endocrinol (Lausanne)* 2018; **9**: 284 [PMID: 29915558 DOI: 10.3389/fendo.2018.00284]

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