Cross sectional Study to look at the factors leading to therapeutic inertia in UK primary setting in the management of T2DM

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Background:

Current literature has provided evidence that recommended control of HbA1c, blood pressure, and dyslipidemia reduces the risk of developing diabetes-related macro- and microvascular complications and cardiovascular death¹. Literature presented different factors including clinical inertia, responsible for these management gaps. Clinical inertia is defined as failure to intensify therapy when indicated². Reasons for clinical inertia are multi-factorial³⁻⁴. Current literature cannot demonstrate documented factors leading to clinical inertia in the care of persons living with T2DM in the UK primary care setting⁵.

Aim

To study factors associated with therapeutic inertia in the management of T2DM in UK primary setting and to develop a predictor model to estimate the probability of therapeutic inertia based on patient factors, clinical characteristics, and level of care provided.

Method

Multicentre, observational, cross-sectional study where each participating clinician collected clinical data on consecutive patient's consultations. An event of Therapeutic inertia was defined as a consultation in which treatment change was indicated (i.e. HbA1c > 58mmol/mol) in all patients but did not occur. The predictive factors were analysed and the association of factors with inertia were validated.

Results

Data were collected on 128 patient consultations. The binary logistic regression model showed that odds of therapeutic inertia were 1.10 with the increasing age, 38.3 with A1C levels of 58-65mmol/mol as compared to higher HbA1c levels, odds of 6.3 with 66-75mmol/mol than other A1C levels. Similarly, odds of therapeutic inertia in higher systolic BP (>140) were 1.1.

The linear regression model predicted (p<0.001) that therapeutic inertia occurred 15.1 times more with lower A1c as compared to higher A1c (B coefficient 86.57). Other predictors of therapeutic inertia in consultations included the competing demands of other presenting problems when consulted by GP as compared to a PN (p<0.001) and patients based factors for clinical inertia.

Conclusion

Although therapeutic inertia is frequent in the management of T2DM, the factors explaining it are not completely clear. Whereas some aspects of the consultations were associated with therapeutic inertia, patients related factors were not the only decisive factor leading to clinical inertia.

References

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Therapeutic inertia is statistically significantly associated with the HbA1c level (p-value <0.001)

Variation explained are 35.4%

Block 1: Method = Forward Stepwise (Conditional)

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	A1C	-0.068	0.016	18.352	1	0	0.934
	Constant	5.445	1.223	19.817	1	0	231.625
Step 1 ^b	A1C	-0.064	0.016	15.206	1	0	0.938
	DBP	0.06	0.027	4.923	1	0.026	1.062
	Constant	0.406	2.49	0.027	1	0.871	1.5

a. Variable(s) entered on step 1: A1C.

b. Variable(s) entered on step 2: DBP.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
1	(Constant)	.762	.065		11.717	.000
	FU_GP_PN	-.548	.086	-.545	-6.366	.000
2	(Constant)	.013	.239		.054	.957
	FU_GP_PN	-.441	.088	-.438	-4.984	.000
	HbA1c level	.009	.003	.286	3.249	.002

b. Variable(s) entered on step 2: DBP.