Prevalence of Cardiometabolic Risk Factors in First Episode Psychosis Patients

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SUPPORTING HEALTH AND PROMOTING EXERCISE

INTRODUCTION

Previous research in patients with schizophrenia have shown a high prevalence of metabolic syndrome and disease progression (~30-40%) which presents an increased risk for cardiovascular disease and long-term mortality (Correll et al. 2014; Mitchell et al. 2013). To date, little is known about the prevalence of existing cardiometabolic risk factors at time of diagnosis. This study presents a clinical overview of the cardiometabolic risk profile in young people presenting with early psychosis from a UK early intervention in psychosis service.

METHODS

Participants (n=45; age 24.4 ± 4.5 yrs, 71% male, 88.9% White British) clinically diagnosed with a first episode psychosis with <3 months (n=39) or< 6 months (n=6) Duration of Untreated Psychosis (DUP) were assessed for anthropometric, lifestyle behaviours and clinical measurements including resting heart rate, blood pressure, blood lipids, HbA1c, and prolactin. The majority (n=38, 84.4%) were in receipt of antipsychotic medication (8.9% Aripiprazole, 28.9% Olanzepine, 31.1% Quetiapine, 4.4% Risperidone, 2.2% Paliperidone, 6.7% Clozapine). Seven participants (15.6%) were not on any antipsychotic medication.

RESULTS

Table 1 presents the cardiometabolic risk status and self reported lifestyle behaviours at baseline by sex of this first episode psychosis patient sample (n=45).

- Participants had high prevalence of cardiometabolic risk factors due to elevated values for BMI (38.1%), abdominal adiposity (57.5%), high blood pressure (30.8% pre-hypertensive; 20.5% hypertensive), elevated resting heart rate (44.7%), hypercholesterolemia (27.9%), suboptimal HDL levels (25.6%), and hypertriglyceridemia (42.1%).
- Participants also self-reported poor lifestyle habits including: smoking (55.8%), alcohol use (37.2%), substance use (16.3%), poor diet (53.5%), and a sedentary lifestyle (39.5%).

CONCLUSION

- Young people with psychosis are at increased risk for cardiometabolic disorders due to elevated clinical markers and unhealthy lifestyle behaviours.
- Physical health interventions are needed early in the treatment process to address the increased risk for cardiometabolic disorders in individuals recently diagnosed with psychosis.

Table 1. Cardiometabolic risk status and self reported lifestyle behaviours at baseline by sex.

Variable	Threshold	N	Total	N	Males	N	Females
Lifestyle Behaviors							
Smoking	Currently smoke or within past 3 mos.	43	24 (55.8%)	31	19 (61.3%)	12	5 (41.7%)
Alcohol Use		43	16 (37.2%)	31	11 (35.5%)	12	5 (41.7%)
Substance Use		43	7 (16.3%)	31	6 (19.4%)	12	1 (8.3%)
Unhealthy eating	< 5 fruits/ veg.d^{-1}	43	23 (53.5%)	31	13 (41.9%)	12	10 (83.3%)
Sedentary Lifestyle	< 90 min.wk^{-1}	43	17 (39.5%)	31	12 (38.7%)	12	5 (41.7%)
Body Composition							
Weight (kg)		42	88.1 (16.9)	31	87.2 (14.9)	11	90.6 (22.3)
BMI (kg.m^2)	< 25.0	42	29.1 (5.8)	31	27.9 (4.9)	11	32.5 (6.9)*
Weight Status (%)							
Underweight	> 18.5	42	2 (4.8%)	31	2 (6.5%)	11	0
Normal	18.5 – 24.9	42	9 (21.4%)	31	8 (25.8%)	11	1 (7.7%)
Overweight	25.0 – 29.9	42	15 (35.7%)	31	11 (35.5%)	11	4 (36.4%)
Obese	30.0 – 34.9	42	11 (26.2%)	31	9 (29.0%)	11	2 (18.2%)
Extremely Obese	> 35.0	42	5 (11.9%)	31	1 (3.2%)	11	4 (36.4%)
Waist Circumference (cm)	♂ < 94 ♀ < 80	39	96.4 (15.0)	29	94.5 (15.4)	10	101.7 (13.1)
Cardiometabolic measurements							
Systolic (mm Hg)	< 140	39	126.0 (20.7)	29	131.2 (20.9)	10	111.1 (11.2)*
Diastolic (mm Hg)	< 90	39	80.0 (16.5)	29	81.1 (17.8)	10	76.3 (12.0)
Prehypertensive (%)	120/80 - 139/89	39	12 (30.8%)	29	7 (24.1%)	10	5 (50.0%)
Hypertension (%)	>140/90	39	8 (20.5%)	29	8 (27.6%)	10	0
Resting pulse (beats.min^{-1})	< 80	38	78.5 (17.9)	28	79.1 (18.3)	10	76.8 (17.8)
Total Cholesterol (mmol.L^{-1})	< 5.0	40	4.7 (1.1)	29	4.8 (1.1)	11	4.4 (0.7)
HDL Cholesterol (mmol.L^{-1})	♂ < 1.03 ♀ < 1.29	39	1.3 (0.7)	29	1.3 (0.9)	10	1.4 (0.3)
Triglyceride (mmol.L^{-1})	< 1.7	19	1.6 (1.0)	13	1.8 (1.1)	6	1.2 (0.7)
HbA1c (mmol.mol)	< 42	28	36.5 (8.1)	21	37.4 (9.2)	7	33.7 (2.8)
Prolactin (mIU/L^{-1})	< 400	33	506.1 (548.0)	23	322.6 (207.8)	10	928.1 (823.6)*

*, significantly different compared to males (p< 0.05).

References:
Correll et al. (2014). *JAMA Psychiatry* ,71 (12), 1350-1363.
Mitchell et al. (2013). *Schizophrenia Bulletin,* 39(2), 306-318.

FOR FURTHER INFORMATION VISIT: www.myshape.org.uk

GRANT FUNDED BY
The Health Foundation Inspiring Improvement | Shine

IN COLLABORATION WITH
Worcestershire Health and Care NHS Trust
McClelland Centre Health & Wellbeing at the University of Worcester