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Cervical cancer screening and psychosis: a longitudinal retrospective study comparing women with schizophrenia spectrum disorders and the general population

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Cervical cancer (CC) is more frequent and occurs at earlier ages among patients with psychosis compared to the general population.[1] CC screening as a preventive strategy is highly effective in reducing its incidence and mortality, but adherence to such screening among women with psychosis is significantly lower than in the general population.[2] Non-adherence to screening protocols may be related to an increased risk of presenting with CC.[3] We aimed to explore the presence of differences in CC screening rates between women with psychosis and a control group.

We studied 286 women with psychosis and 86 women without mental disorders, all over 25 years old, from the First Episode Psychosis clinical Program cohort (PAFIP; Cantabria, Spain).[4] The study was approved by the Clinical Research Ethics Committee of Cantabria. Cervical screening and pathology data were retrieved retrospectively from medical records in December 2021. Protocol adherence (yes vs. no) was defined according to previous literature[2] and to international protocols, whereby women should undergo their first cytology at age 25 and every 3 years thereafter. We used analysis of variance (ANOVA) to compare continuous variables and the chi-square test for categorical variables. All statistical tests were two-tailed, and significance was determined at the 0.05 level.

A significantly greater proportion of women in the control group had undergone at least one cytology test in their lifetime compared to women in the psychosis group (81.6% vs. 67.1%; $\chi^2 = 5.986$, $p = 0.009$). Women with psychosis also entered the CC screening protocol significantly later than healthy controls (33.4 vs. 28.7 years; $F = 12.433$, $p = 0.001$). Fewer women with psychosis (34.3%) met criteria for CC protocol adherence compared to those in the control group (55.3%; $\chi^2 = 11.162$, $p = 0.001$). Moreover, the time elapsed since last cytology was significantly longer among psychosis patients than in the control group (4.7 vs. 3.3 years; $F = 4.808$, $p = 0.029$). We found no significant differences between groups (14 women with psychosis vs. 6 controls) in the proportion of altered cytology tests, nor in the proportion of biopsies with pathological results (3.5% of women with psychosis vs. 1.3% of controls; Yates' $\chi^2 = 0.537$; $p = 0.463$): one woman with cervical intraepithelial neoplasia (CIN)-III in the control group versus 10 cases of cervical pathology among women with psychosis (one of cervical cancer, seven of CIN-III, and two of CIN-II). Comparisons between women in the psychosis group with (n=98, 34.3%) or without (n=188, 65.7%) CC protocol adherence showed relevant differences (Table 1).

Over one-third of women diagnosed with psychosis in our cohort had never undergone a CC screening test; those who had ever attended screening did so at an older age than the general population, and 8 years after the optimal age defined in international protocols.[5] Furthermore, women with psychosis presented a significantly lower rate of good screening protocol adherence, which is consistent with previous research.[2] Women in the psychosis group were three times more likely to present with cervical pathology and 10 times more likely to exhibit high-grade cervical pathology than control women. These differences in abnormal findings, although not statistically significant due to the small number of cases, may be the result of patients not attending CC screening.

These results should be taken into account when treating women with psychosis, who should be encouraged to enter a CC screening program if they are sexually active.

Table 1 Clinical and sociodemographic differences at psychosis breakout predicting poor cervical cancer screening in women with psychosis

	Protocol-adherent patients (n=98) Mean (SD)	Protocol-nonadherent patients (n=188) Mean (SD)	Total (n=286) Mean (SD)	Statistics		
				df	F	p-value
Age	42.5 (10.1)	45.3 (10.3)	44.4 (10.3)	1; 285	4.845	0.029
DUP, months	16.8 (43.2)	15.4 (40.0)	15.9 (41.0)	1; 277	0.079	0.779
SAPS-SANS, Positive psychotic dimension†	6.9 (2.5)	7.6 (2.4)	7.4 (2.4)	1; 282	3.904	0.049
SAPS-SANS, Negative psychotic dimension†	3.1 (4.9)	4.3 (5.5)	3.9 (5.3)	1; 282	3.099	0.079
GAF	58.8 (33.3)	57.9 (32.7)	58.3 (32.9)	1; 196	0.029	0.864
Premorbid adjustment	1.29 (1.30)	1.83 (2.02)	1.64 (1.81)	1; 224	4.573	0.034
GCF, Z-score	1.37 (0.95)	1.28 (0.88)	1.31 (0.90)	1; 170	0.394	0.531
	% (n)	% (n)	% (n)	n	χ^2	p-value
Education level, secondary or lower	40.8 (40)	37.2 (68)	38.4 (108)	281	0.361	0.318
Family socioeconomic status, unskilled/low-skilled	55.7 (54)	56.7 (101)	56.4 (155)	275	0.029	0.482
Single	51.0 (50)	54.4 (99)	53.2 (149)	280	0.291	0.339
Unemployed	28.9 (28)	41.8 (76)	37.3 (104)	279	4.498	0.023
Diagnosis, schizophrenia	41.7 (40)	44.9 (84)	43.8 (124)	283	0.273	0.347
Drug consumption						
Tobacco smoking	47.9 (46)	44.1 (82)	45.4 (128)	282	0.375	0.313
Alcohol consumption	36.8 (35)	24.9 (46)	28.9 (81)	280	4.380	0.026
Cannabis smoking	24.0 (23)	18.7 (35)	20.5 (58)	283	1.070	0.189

DUP = duration of untreated psychosis; GAF= Global Assessment of Functioning; GCF = Global Cognitive Function.
† Andreasen's Scales for the Assessment of Negative and Positive Symptoms (SANS-SAPS).

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