8 CERVICAL ABNORMALITY RISK INCREASES IN WOMEN WITH MS TREATED WITH HIGH-EFFICACY DISEASE MODIFYING THERAPY

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10.1136/bmjno-2023-ANZAN.8

Objectives To evaluate the risk of cervical abnormality in women with multiple sclerosis (MS) exposed to high efficacy-disease modifying therapies (DMTs).

Methods Multi-centre retrospective cohort study in Victoria, Australia utilising data collected from 1998–2019. Data linkage matched patient data across three registries: (1) MSBase Registry (2) National HPV Vaccination Program Register (NHVPR) (3) Victorian Cervical Cytology Register (VCCR). Primary outcome was detection of any type of cytological or histological cervical abnormality classified as low-grade or worse (>/= grade 1 cervical intraepithelial neoplasia) identified on cervical screening tests. Survival methods assessed time to cervical abnormality. Crude and adjusted Cox proportional hazards were used to determine the magnitude of association of exposure to high-efficacy DMTs with cervical abnormality.

Results 248 women with MS were included in the analysis. Cervical abnormality incidence was higher for women exposed to high-efficacy DMTs (36.6/1000 patient-years (95% CI 21.7 – 51.6)) than those unexposed to high efficacy therapy (10.2/1000 patient-years (95% CI 5.5–14.9), p<0.001). High-efficacy DMT exposure was associated with a 3.79-fold increased hazard (95% CI 2.02–7.08, p<0.001) of developing a cervical abnormality. This risk persisted despite adjusting for human papillomavirus (HPV) vaccination status, smoking, hormonal contraceptive use and socioeconomic status (HR 3.78, 95% CI 1.98–7.19, p<0.001).

Conclusions A greater than 3.5-fold increased risk of cervical abnormality was detected after exposure to high-efficacy DMTs. This highlights the need for increased safety vigilance including patient-centred counselling and ensuring participation primary and secondary prevention strategies such as HPV vaccination and cervical screening programs for women with MS.

8 DOSING OF ORAL CORTICOSTEROID THERAPY AND THE RISK OF RELAPSE AT THE ONSET OF MOGAD

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10.1136/bmjno-2023-ANZAN.9

Objectives We evaluated the association of oral corticosteroids (OCS) administered for the initial attack of myelin oligodendrocyte glycoprotein antibody-associated disease (MOGAD) with the risk of relapse.

Methods We documented clinical presentation of MOGAD, immunotherapy administration, and time to first relapse among patients from the Australasian MOGAD Study Group who had at least 2 sufficiently documented consultations. A Cox proportional hazards model with OCS dose as a time-varying covariate examined the relationship between OCS and the hazard of first relapse, adjusted for IV corticosteroid therapy and age.

Results We evaluated 99 patients [(53 female; median age at disease onset 24 years (range 1–69 years); median follow-up duration 69 months (range 5–640 months)]. 67 patients experienced a relapse; median survival time to relapse was 16.4 months. The 57 patients treated with OCS had a median course duration of 47 days (range 5–1242 days) with a median time from first symptoms to initiation of 12 days (range 0–61 days). Higher dose OCS following the initial attack of MOGAD was associated with a lower cumulative hazard (HR=0.97, 95%CI=0.95–0.998 p=0.03). In this model, no evidence was found to support IV corticosteroid dosage modifying relapse risk (p=0.23).

Conclusions Higher doses of OCS following the initial attack of MOGAD are associated with a lower hazard of early relapse. On average, for every 1mg increase in oral prednisolone dose, the cumulative hazard of relapse decreased by 3%. These results have the potential to inform the development of evidence-based treatment strategies for this increasingly recognised CNS autoimmune disorder.