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P009 -Adverse effects of oral glucocorticoid therapy in autoimmune disease – a quality improvement project

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Background: Glucocorticoids play an integral role in the management of many autoimmune conditions. However, their use is associated with many adverse events. Patients on long-term (greater than 3 weeks) oral corticosteroids (LTOC) are at highest risk, and as such careful monitoring is required.
Aims: This quality improvement project evaluated the adverse effects profile of LTOC in a prevalent clinic population with autoimmune disease. The plan was to develop a local review structure, which ensures appropriate monitoring of patients on LTOC.
Methods: 198 medical records of consecutive prevalent patients attending our Vasculitis and Lupus Clinic between 6/11/2018 and 13/11/2018 were reviewed until 100 patients taking LTOC therapy were identified. The following parameters were measured: duration of LTOC therapy, blood pressure, weight, cardiovascular side effects, development of diabetes, hypertension and osteoporotic fractures. We also recorded the use of anti-hypertensive, gastric and bone protection medications. Laboratory parameters, DEXA scans, the development of any ocular side effects (glaucoma, cataracts) and infectious complications were also recorded.
Results: The median period of LTOC treatment was 44.7 months or 3.8 years (range 1 - 61.2 months) with 41% of patients having been on LTOC for more than 4 years. Female patients represented 55%, and the median age of the patients was 58.5 years (range 20 – 83). The median daily prednisolone dose was 7.5 mg (range 1 - 40mg). The most common indication was small vessel vasculitis in 54%. Large vessel vasculitis was seen in 11%, lupus in 10%, Behcet's disease in 7%, primary glomerulonephritis in 6% and IgA vasculitis in 2%. A total of 39 patients (39%) were found to be hypertensive in the clinic and one third (n=12, 31%) of those were new cases – and 7 of these were not started on anti-hypertensive therapy. Cholesterol and triglyceride levels had not been checked in 45% and 49% of the cohort respectively. HbA1C was not checked in 40%, and random plasma glucose in 26% of the clinic attendants. Diabetes was diagnosed in 8%, and cardiovascular disease in 11% of the cohort. Ocular complications occurred in 16% of patients. The most common LTOC side effect was infection affecting 74% of patients; 25% of whom required hospital admission for intravenous antibiotic treatment. There was a significant difference in the BMI between the LTOC start date and at the time of the data collection (27.8 Kg/m2 Vs 28.7 Kg/m2, $p<0.05$). Gastric protection was not prescribed in 13% of patients, and 16% were not receiving any bone protection therapy, 55% had never had a DEXA scan and 10% of patients had sustained a fracture.
Conclusion: Adverse effects from LTOC are common and a structured approach to reviewing patients would facilitate appropriate monitoring and the implementation of prophylactic measures. We plan to highlight these findings to clinicians working on the Clinic and implement a structured annual review for all patients on LTOC.