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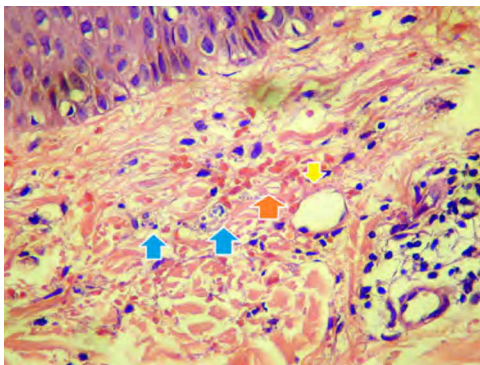
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Cutaneous Vasculitis in a Patient With Crohn's Disease Treated With Adalimumab

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Background: Anti-TNF therapies have been rarely associated with cutaneous vasculitis. Herein we describe a case of cutaneous vasculitis in a patient receiving adalimumab therapy. **Case presentation:** A 28-year-old woman with a history of Crohn's disease refractory to conventional therapy started treatment with adalimumab in 2012. She had no prior history of cutaneous manifestations. After 24 months of adalimumab therapy, she reported raised lesions on her legs (Figure 1). She denied any accompanying joint pain or constitutional symptoms. Laboratory tests, including CRP, ESR, blood counts, urinalysis, and complement, were normal. ANA, anti-ENA, RF, cANCA, pANCA, anti-phospholipid and cryoglobulins were negative. A skin biopsy described leukocytoclastic vasculitis in the post-capillary venules. This finding was strongly suggestive of cutaneous drug-induced vasculitis (Figure 2). Five days after the onset of vasculitis, the adalimumab was withdrawn and the patient started on high dose prednisolone (60mg/day). However, only moderate response was observed, so colchicine was added at 0.5mg TID. The cutaneous lesions then resolved within 3 days of colchicine therapy, allowing steroid tapering. **Conclusion:** This case report illustrates cutaneous vasculitis as a potential association with anti-TNF therapy. In addition to stopping the suspected drug, colchicine may be helpful in patients refractory to high-dose glucocorticoids.



Su1004

Using Search Engine Query Data to Explore Epidemiology of Common Gastrointestinal Symptoms

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Background Internet search activities are an increasingly used tool in medical research, and search data has been recognized as a promising source of medical information by the Institute of Medicine. One particularly fruitful source of information has been Google Trends, a free

publically accessible portal for analyzing trends in the Google search engine. This resource has been used to understand the epidemiology of multiple disease states, including communicable and non-communicable diseases. To date, no studies have examined Google search data in relation to common gastrointestinal (GI) symptoms. Our aims were to compare changes to search volume for common GI symptoms to clinical data sets. **Methods:** Using Google Trends, we recorded relative changes to search volume for searches related to dysphagia, vomiting, and diarrhea in the United States between January 2008 and January 2011. At the same time, we queried the National Inpatient Sample (NIS) during that same time period and identified cases with ICD-9-CM codes related to these symptoms as the primary diagnosis for the same time period. We also queried the National Hospital Ambulatory Medical Care Survey (NHAMCS) and identified cases associated with these same symptoms as the primary reason for visit for the same period. We calculated Pearson correlation coefficients to assess correlation between changes to Google search volume and changes to number of cases in the NIS and NHAMCS datasets during this timeframe. **Results:** Changes to Google search volume for all three symptoms correlated significantly with NIS output (dysphagia- $r = 0.5$, $P = 0.002$; diarrhea- $r = 0.79$, $P < 0.001$; vomiting- $r = 0.76$, $P < 0.001$). Both Google and NIS data showed that the prevalence of all three symptoms rose during the time period studied (2008-2010). On the other hand, the NHAMCS data trends during this time period did not correlate significantly with either the NIS or the Google data for any of the three symptoms studied. **Conclusion:** Changes to the population burden of chronic GI symptoms may be easily tracked by monitoring changes to Google search engine query volume over time, which correlated well with a large inpatient clinical dataset for three common GI symptoms. During the time frame examined, the burden of dysphagia, diarrhea, and vomiting appeared to rise. The outpatient dataset that we examined did not correlate with either of the other datasets, likely related to its relatively small sample size. Its ease of making search engine query data a powerful tool in furthering our understanding of the population burden of common symptoms, and since some who experience illness do not seek medical attention, data of this type may shed light on dimensions of disease that exist outside of a standard medical context.

Su1005

Intestinal Ultrasound Accurately Assesses Disease Activity in Inflammatory Bowel Disease When Compared to Faecal Calprotectin

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Introduction Current guidelines recommend a treat to target approach in the management of patients with inflammatory bowel disease (IBD) utilising objective measures of disease activity. Faecal calprotectin is a non-invasive biomarker which has been shown to be a surrogate marker for mucosal healing. However, calprotectin has significant limitations including a lack of information regarding disease location, inter-patient variability and moderate rates of both false negative and positive results. Intestinal ultrasound (IUS) is a non-invasive imaging modality which has the ability to provide information on both disease activity and location. There is a paucity of data comparing the accuracy of IUS to calprotectin results. **Aim** To assess the accuracy of IUS compared to calprotectin levels in evaluating disease activity in IBD. **Methods** A prospective IUS database for all imaging is maintained at the Alfred Hospital. All patients with an IUS and faecal calprotectin performed within 7 days of each other in 2014 were enrolled. C-reactive protein (CRP) values were also analysed with a CRP < 3 mg/L considered normal. IUS was performed by one of two IBD gastroenterologists with expertise in IUS. Statistical analyses were undertaken to assess the accuracy of IUS using different thresholds for calprotectin including 30 μ g/g, 50 μ g/g, 100 μ g/g and 250 μ g/g. **Results** The database included 139 patients (47% females) with the majority having Crohn's disease (86%). Forty-eight IUS patients had matched faecal calprotectin levels. Sensitivities, specificities, positive (PPV) and negative predictive values (NPV) are shown in Table 1. For each threshold, IUS had very high negative predictive values. Conversely, IUS had a high positive predictive value only when calprotectin levels exceeded 250 μ g/g. 107 patients undergoing an IUS had a matched CRP measured with 7 days of the scan. 45 patients had an elevated CRP. The sensitivity and specificity of CRP with positive IUS findings were 65% and 68% respectively. The PPV and NPV of CRP were 49% and 80% respectively. 35 patients had both matched calprotectin and CRP and in this group, all patients (n=6) with calprotectin < 30 and CRP < 3 had negative IUS findings. The sensitivity and specificity of calprotectin & CRP with positive IUS findings were 73% and 85% respectively with the corresponding PPV and NPV being 79% and 81%. **Conclusion** This study demonstrates the accuracy of IUS in assessing disease activity when compared to faecal calprotectin. IUS has the additional benefits of being able to provide information regarding disease location and complications such as strictures and fistulae. This also study shows that CRP is an inferior biomarker to both calprotectin and IUS. The combination of IUS and faecal calprotectin are ideal non-invasive tools to monitor disease activity in IBD as a replacement for colonoscopy.

1- Accuracy of intestinal ultrasound

Calprotectin	Sensitivity	Specificity	PPV	NPV
30 μ g/g	74%	100%	53%	100%
50 μ g/g	74%	91%	53%	96%
100 μ g/g	76%	75%	63%	85%
250 μ g/g	88%	76%	84%	81%