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| **Supplementary table: IBD studies with regard to Vit-D level and disease activity status** |
| **Study** | **Year** | **Study Type** | **IBD (CD/UC) Participants** | **Results** |
| Schaffler et al. [27] | 2018 | Observational retrospective | 203 (123/ 85) | Patients with lower Vit-D levels had higher UC clinical activity or had a small bowel involvement/resection in CD Patients. |
| Winter et al. [28] | 2017 | Observational retrospective | 173 (116/57) | Patients with higher Vit-D levels were more often in remission undergoing an anti-TNFα Therapy. |
| Hlavaty et al. [9] | 2014 | Observational retrospective | 220 (141/79) | Patients with low Vit-D levels had a lower quality of life.  |
| Han et al. [15] | 2017 | Observational retrospective | 83 (34/49) | Vit-D deficiency was associated with female gender and CD. |
| Santos-Antunes et al. [25] | 2016 | Observational prospective | 68 (56/12) | Pretreatment Vit-D deficiency was a significant risk factor for anti-TNF-α therapy associated adverse effects. |
| Dumitrescu et al. [29] | 2014 | Observational prospective | 47 (14/33) | Vit-D levels were lower in CD patients with high disease activity. |
| Kabbani et al. [30] | 2016 | Observational prospective | 965 (598/637) | Low Vit-D levels were associated with higher morbidity and disease activity.  |
| Veit et al. [31] | 2014 | Observational retrospective | 58 (40/18) | IBD patients with elevated erythrocyte sedimentation rate had significantly lower Vit-D levels. |
| De Bruyn et al. [32] | 2014 | Observational prospective  | 101 (101/0) | There was no significant difference of Vit-D levels between patients with CD and healthy controls. |
| Gilman et al. [33] | 2006 | Observational prospective  | 73 (47/26) | IBD patients had significantly lower Vit-D levels than healthy controllers. |
| Suibhne et al. [34] | 2012 | Observational prospective  | 81 (81/0) | Vit-D deficiency rate was higher in CD patients and it was associated with longstanding disease, smoking and winter period.  |
| Grunbaum et al. [35] | 2013 | Observational prospective  | 55 (34/21) | In patients with mild or inactive IBD, Vit-D levels were similar to controls. |
| Meckel et al. [23] | 2016 | Observational prospective  | 230 (0/230) | Vit-D levels inversely correlated with mucosal inflammation and disease activity. |
| Ye et.al. [36] | 2017 | Observational retrospective  | 131 (131/0) | Vit-D levels were inversely correlated with endoscopic, clinic and laboratory disease activity. |
| Dolatshahi et al. [37] | 2016 | Observational prospective  | 50 (0/50) | Lower Vit-D levels were associated with higher disease activity. |
| Alrefai et al. [38] | 2017 | Observational retrospective | 201 (201/0) | Vit-D levels were inversely associated with indicators of disease activity. |
| Venkata et al. [39] | 2017 | Observational retrospective | 880 (880/0) | Patients with low Vit-D levels had higher hospitalization rates. |
| Gubatan et al. [40] | 2018 | Observational prospective | 70 (0/70) | Vit-D levels were associated with anti-inflammatory serum cytokine profiles. |
| Frigstad et al. [41] | 2016 | Observational prospective  | 408 (230/178) | Vit-D deficiency was associated with clinical activity and relapses in CD patients and with fecal calprotectin in UC group. |
| Jun et al. [42] | 2019 | Observational retrospective | 70 (29/41) | Vit-D levels negatively correlated with CRP in CD group. |
| Branco et al. [43] | 2019 | Observational prospective | 150 (106/44) | Patients with severe Vit- D deficiency had a higher CRP, CD activity index and lower hemoglobin level. |
| IBD: inflammatory bowel disease; Vit-D: vitamin-D; CD: Crohn disease; UC: ulcerative colitis |