Background: Cardiac MRI and 18-fluorodeoxyglucose positron emission tomography (18 FDG-PET-CT) are commonly used to diagnose cardiac sarcoidosis (CS). Their clinical utility in early and late stage of the disease is unclear.

Objective: To compare the diagnostic utility of 18FDG-PET-CT and CMR in patients with early and late stage of CS.

Methods: Data of 96 consecutive patients with CS from the Granulomatous Myocarditis Registry was analysed. All patients underwent a 18 FDG-PET-CT and CMR within 1 week of their initial clinical presentation. Patients were divided into early (<6 months) (ES) and late stages (LS) based on the duration of time since their first cardiac presentation. The uptake index (UI) was defined as the product of maximum standardized uptake value and the number of LV segments with abnormal uptake on 18 FDG-PET-CT. Clinical response (CR) was assessed after 4-6 months of immunosuppressive therapy. CR was defined as an improvement in functional class ≥ 1 and freedom from ventricular arrhythmias and HF hospitalizations.

Results: Among the 91 patients in the final analysis (age, 44.1±10.3yrs; left ventricular ejection fraction, 43.1±9.5%), 54.9% and 45.6% had an ES and LS CS, respectively. At initial presentation, patients with LS had higher frequency of ventricular arrhythmias (82.9% vs. 60.0%, p = 0.012) and a reduced LVEF (35.6% vs. 54.5%, p = 0.009) compared to those with ES. In patients with ES CS, abnormal myocardial uptake on PET-CT was noted in all (100%) and 68% had late gadolinium enhancement on CMR (p = 0.001). Diagnostic yield of PET and CMR was similar in ES CS (92.7% vs. 95.1%, p = 0.498). (Figure) The UI was higher in patients with ES compared to those with a LS CS (78.4 vs. 43.6, p = 0.002). In addition, CR was higher in patients with an ES compared to those with a LS CS (82.0% vs. 68.3%, p = 0.034).

Conclusion: In patients with early disease, 18 FDG-PET CT appears to be superior to CMR in diagnosis of cardiac sarcoidosis.

Objectives: We aimed to perform a meta-analysis of all available studies to evaluate the effect of yoga therapy on patients with recurrent VVS.

Methods: A systematic search of electronic databases was performed to identify studies evaluating yoga therapy along with current guideline-based therapy in patients with recurrent VVS. The primary outcome was the number of VVS attacks and quality of life (QoL) assessment by Syncope Functional Status Questionnaire (SFSEQ) scores at 12 months. The Mantel-Haenszel random-effects model was used to calculate the mean difference (MD) and 95% confidence interval (CI).

Results: We included four studies, two randomized trials, and two observational studies. A total of 309 patients were included. The mean age of participants was 36.4 ± 13.5 years, with 141 participants (45.6%) being males. The baseline syncope burden was 3.5 ± 2.38 episodes over 15.6 ± 12.8 months. Compared to the control group, Yoga therapy significantly reduced the mean number of syncopal and presyncopal attacks (MD -1.86%; 95% CI -3.30, -0.43; P < 0.01; Figure). However, Yoga therapy didn't improve QoL assessed by SFSEQ scores (MD -30.69; 95% CI -62.22,0.83; P = 0.06; Figure).

Conclusion: Among patients with recurrent VVS, Yoga therapy is beneficial as an adjunct therapy in reducing the recurrence of syncopal and presyncopal attacks. However, yoga therapy didn’t improve the QoL.

THE EFFECT OF YOGA THERAPY ON PATIENTS WITH RECURRENT VASOVAGAL SYNCOPES: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Yoga therapy may reduce the symptomatic burden and improve the quality of life in patients with recurrent vasovagal syncope (VVS). Treatment of VVS is challenging as current medical therapy is limited. The recently published LIVE-Yoga study showed that yoga as adjunctive therapy is superior to standard therapy alone. However, the data on yoga therapy for VVS treatment is less clear.

Hospitals for Inflammatory Bowel Disease - An Analysis of the National Database

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Background: Inflammatory Bowel Disease (IBD) associated chronic inflammation and autonomic dysregulation have been reported in the literature to predispose to arrhythmias in particular atrial fibrillation.

Objective: The aim of the present study is to determine the trends of AF amongst patients hospitalized for ulcerative colitis (UC) and Crohn’s disease (CD) from 2003-2017 and establish an association using the National Inpatient Sample database (NIS).

Methods: We analyzed NIS data of adults diagnosed with AF and UC or CD, either as primary or secondary diagnosis using the validated ICD-9 and ICD-10 codes. Sex, race, and other demographics were collected. Trend analysis of AF was performed with Cochran-Armitage trend tests.

Results: Overall Trends: From 2003 to 2017, a total of 2235413 and 1324746 patients were hospitalized due to CD and UC respectively out of which 149114 (6.67%) with CD and 131795 (9.95%) with UC had AF. The overall trend shows an increase in the prevalence of CD, UC from 2003 to 2017 (CD: 4.06% to 8.3%; UC: 4.1% to 8.81%; pTrend = 0.0001). Parallelly there is an increase in the prevalence of AF (CD: 4.21% to 7.97%; UC 7.03 to 10.56; pTrend = 0.0001). There is an increase in the prevalence of AF amongst patients with IBD.
of CD and UC as age increases. Similarly, there is an increase in the prevalence of associated AF diagnosis [(CD-18-25 years:1.31%, 25-44 years:4.94%, 45-64:20.65%, >65:73.1%; p<0.0001); (UC-18-25 years:0.74%, 25-44 years:2.96%, 45-64:15.92%, >65:80.38%; p<0.0001)]. The highest prevalence of IBD and AF was in patients >65 years of age. There was no significant difference in the prevalence of AF in male and female patients with CD and UC over the years from 2003 to 2017 [(CD-M:47.74%, F: 52.26%); (UC - M:51.45%, F:48.55%)].

**Conclusion:** Our finding suggests that there has been an increasing prevalence of AF in patients hospitalized with CD and UC. Considering pathogenesis of AF is linked to systemic inflammation and IBD is associated with systemic inflammation, further studies are necessary to validate and better understand the underlying mechanisms.

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**PO-641-04**

**FUNCTIONAL MAPPING FOR ARRHYTHMOGENIC SUBSTRATE CHARACTERIZATION IS MORE EFFECTIVE IN HEARTS WITH LESS DISEASE REMODELING**

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**Background:** Functional mapping using multiple wavefront pacing (MWP) or decremental pacing (DP) can improve detection of critical sites for ventricular tachycardia (VT) on electroanatomic maps (EAMs). However, it is not well-established how the underlying disease remodeling distribution affects functional substrate characterization on EAMs.

**Objective:** To investigate how substrate characterization on EAMs generated by MWP and DP is affected by the patient-specific distribution of diseased-induced remodeling in the myocardium.

**Methods:** 48 clinical cardiac images were obtained from post-infarct patients undergoing VT ablation and used to reconstruct personalized heart models that represented the patient-specific disease remodeling. MWP was assessed from 50 endocardial and epicardial sites; DP entailed the delivery of a decremental stimulus at 310 ms after the initial at all sites (Fig.A). EAMs were simulated by calculating surface unipolar electrograms (Fig.A). From each EAM, voltage amplitude (VA), conduction velocity (CV), isochronal crowding (IC), fractionation index (FI), electrogram duration (ED), and frequency power (FP) were computed. Similarity between EAM characteristics was compared for different pacing locations and for initial and decremental stimuli (Fig.B,C).

**Results:** EAM similarity was associated with decreasing distance between pacing locations (r = -0.40 [VA], -0.80 [CV], -0.77 [IC], -0.81 [FI], -0.72 [ED], -0.49 [FP]; p<0.0005). The amount of disease remodeling was strongly correlated with EAM similarity between different pacing sites (r = 0.86 [VA], 0.69 [CV], 0.62 [IC], 0.71 [FI], 0.75 [ED], 0.90 [FP]; p<0.0005) (Fig. B). EAM similarity between initial and DP was also correlated with disease remodeling for most characteristics (r = 0.48 [IC], 0.73 [FI], 0.52 [ED], 0.31 [FP], p<0.05). In addition, DP improved detection of areas with high FI (1.47 cm² vs. 3.66 cm², p<0.0005). For different pacing sites, all EAM characteristics exhibited greater similarity in diseased versus non-diseased tissues (Fig. C). Between initial and DP, only IC and FI had increased similarity in diseased versus non-diseased tissues (Fig.C).

**Conclusion:** Mapping with MWP and DP may be more valuable for improving detection of arrhythmogenic VT substrate in hearts with less disease remodeling.

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**PO-641-05**

**SAFETY AND IN-HOSPITAL OUTCOMES OF LEFT ATRIAL APPENDAGE CLOSURE DEVICE IN PATIENTS WITH HEART FAILURE: AN ANALYSIS FROM THE NATIONAL INPATIENT SAMPLE DATABASE 2015-2018**