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Introduction: Shoulder pain is a presenting complaint with both primary care physicians and orthopedic specialists. Shoulder pain may also herald the development of cardiovascular issues such as ischemic heart disease (IHD) or a myocardial infarction (MI). The primary purpose of this study was to concentrate on the occurrence rate of cardiovascular events (CVEs) after shoulder arthroscopic surgeries and to see if there was any difference of CVEs in gender or side of shoulder pathology.

Methods: Consecutive patients who had undergone shoulder arthroscopic surgeries between 2014 and 2015 for shoulder pathologies were obtained from the surgery case logs of a fellowship trained orthopedic surgeon. The study sample size was 696 consecutive patients. We retrospectively reviewed patients' demographics, surgical data and follow-up charts. Age, gender, premedical history, side of shoulder pathology (left vs. right), and CVEs following shoulder arthroscopy were documented. CVE documentation included, MI, IHD, CHF and bundle branch blocks. All patients had a minimum of 6 months follow-up. CVE was the primary grouping variable: Group 1 (n=676) patients without CVE; Group 2 (n=19) patients with CVE. Subgroups were formed based on gender, male (n=384) and female (n=312), age and side of the shoulder pathology were compared between patients with and without CVE. An ANOVA test was utilized for continuous variables and Chi Square test was used for categorical variables. P≤0.05 was considered as statistically significant.

Results: Study sample size n=696; mean age 49 years; gender, males = 384 (55%) and females = 312 (45%); right shoulder arthroscopies=395 (57%) and left shoulder arthroscopies=301 (43%). The CVE rate was 2.7% (n=19). Our analysis reported (Table 1) mean age in patients with CVE was significantly higher (mean =62 years) versus patients without CVE (mean=49years), p<0.001. No difference was noticed for gender; however, there was a correlation between the left shoulder arthroscopies and CVEs, but it failed to reach statistical significance (p=0.14). In the male subgroup (Table. 2), no difference was noticed for side of the shoulder pathology, however, mean age was significantly higher (p<0.001) for patients with CVE (mean = 66 years) versus without CVE (mean = 47years). In the female subgroup (Table. 3), mean age was significantly higher (p=0.049) for patients with CVEs (mean = 56 years) versus without events (mean = 51 years). More CVEs were reported after left shoulder arthroscopies, (p=0.02).

Conclusion: Cardiovascular events rate was 2.7% after shoulder arthroscopy in our study which is similar to the general population prevalence rate (3.5%) for patients aged between 51 to 60 years. The rate was no different for the side of shoulder pathologies or gender. More cardiovascular events were noticed in females who had left shoulder arthroscopies. Our control group size was very small and the study was retrospective in nature which are limitations.