Looking At More Than Just Complications and Outcomes; How Well Can Jannetta Procedures(Microvascular Decompression) Be Performed in a Community Hospital?

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Introduction

The literature is replete with papers reporting better outcomes in major teaching hospitals compared to smaller community hospitals. We analyzed certain metrics in all patients who underwent the Jannetta procedure, also known as microvascular decompression (MVD) from January 1, 2009 thru December 31, 2013 at Mercy Medical Center, Springfield, Massachusetts. We report on surgical time, anesthesia time, morbidity, mortality, and surgical success rates. To the best of our knowledge, this is the first report of single surgeon results from a non-academic, community hospital.

Methods

Data was obtained from the anesthesia records, office and hospital charts, and phone interviews. Mercy Medical Center is 343 bed faith based acute care hospital located in Springfield, Massachusetts. There are no residency or fellowship training programs. All patients spent at least one night in the medical-surgical intensive care unit (ICU). Care after ICU was provided on a regular surgical floor shared with the orthopedic service. Existing hospital infrastructure was utilized without adding any new personnel teams or processes. All surgeries were done "skin to skin" by a single surgeon (KKK).

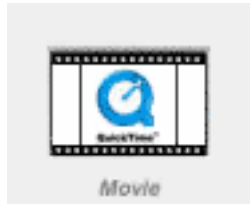
Results

There were a total of 59 patients who each had a single Jannetta procedure during the study period. Only patients with typical, classical, type 1 trigeminal neuralgia (TN), hemifacial spasm (HFS), or glossopharyngeal neuralgia (GPN) were treated. Complete anesthesia data and other data was available on 53 patients and 59 patients,respectively.Average surgical time,anesthesia time,and length of stay(LOS) were 109 minutes,176 minutes,and 2.3 days,respectively.There were no deaths,CSF rhinorrhea, wound infections,or cranial nerve deficits in this series. There were 3 patients with complications that had no permanent sequelae. 77% of TN patients,92% of HFS patients,and the one patient with GPN obtained complete relief of symptoms.

Conclusions

As costs of healthcare are in the spotlight nationally, additional measures that usually are not reported will likely be analyzed. These include costs associated with the hospital setting (community versus academic)and resource utilization (surgical procedure times, LOS, etc.)Longer surgical procedure times and LOS have been associated with higher complication rates. Recently,McLaughlin et al.,reported on value of care in 49 patients having MVD. Assessment of value included measures of average surgical time (230 minutes),LOS (3.27 days),complications(8 patients), and readmissions(4 patients).

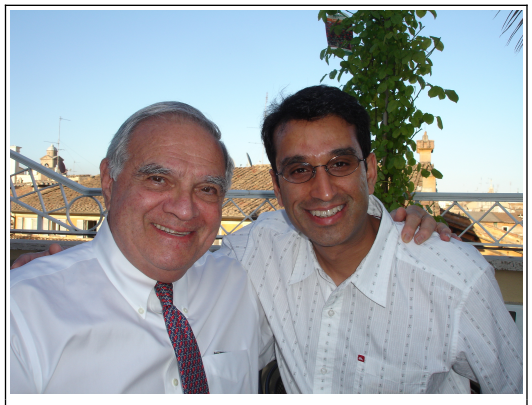
To the best of our knowledge, there has not yet been a similar report of these metrics as they apply to the Jannetta procedure performed in a community hospital setting by a single surgeon. We report such a series with results favorable to those in the literature. Posterior fossa microsurgery is technically demanding and complex care is thought to be delivered better in academic hospitals.Community hospitals differ from large academic institutions in many ways. They are usually smaller, may offer less complex care, and are usually not teaching residents and fellows. Patient satisfaction rates, however, may be higher in nonteaching hospitals. In the state of Massachusetts , academic medical centers, specialty hospitals, and teaching hospitals tend to have higher than average relative prices across all payer networks. In contrast, community hospitals tend to have lower prices across all payer networks. In some situations, community hospitals are reimbursed at rates up to 40% lower than network averages. Utilizing only processes common to the community hospital setting and without any additional administrative or protocol measures, we report on some measures of value regarding performance of the Jannetta procedure over a 5 year period. In 59 consecutive cases, the average operative time and anesthesia time were 109 and 176 minutes, respectively. Short term surgical success rates were excellent.



This report illustrates that a relatively uncommon, technically demanding neurosurgical procedure can be delivered effectively with high value and low cost in a community hospital setting.

Learning Objectives

By the conclusion of reviewing this paper, participants should be able to: 1)discuss future methods to determine surgical value 2)compare their own data to those presented by the authors



Drs. Jannetta and Kalia in Rome, Italy 2007, above. Below, Dr Kalia performs Jannetta Procedure, CN V