Safety, Efficacy and Life Satisfaction Following Resective Epilepsy Surgery in Older Patients

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Disclosures

Relevant Financial Relationships

None

Epilepsy and Surgery: Background

- 30% of patients started on 1-2 anti-seizure drugs do not experience seizure freedom¹
- Uncontrolled seizures account for 80% of the cost of epilepsy in the US²
- Epilepsy surgery is an important alternative to continued drug trials³
  - Such an intervention can be effective in eliminating seizures in over 70% of patients
  - ES can lower seizure-related morbidity and mortality, and increase quality of life

Epilepsy and Older Age: Significance

• About 1/4 of patients with epilepsy are estimated to > 60 years of age.
• Professional consensus on the optimum age for ES is currently lacking.
• Surgery in older people is considered controversial.
  - Controversy exists secondary to the higher incidence of comorbidities, reduced safety, longer duration of epilepsy, lower likelihood of seizure freedom following surgery and poor adaptation.

Goals of Present Study

• Report on our experience with epilepsy surgery (ES) in patients > 60 years of age.
• To determine the factors motivating older patients to consider surgery.
• Explore personal reflections on the impact of surgery on the quality of their lives.

Methods

• Consecutive patients > 60 years of age at the time of ES were identified from the UCLA surgical series data base from 1998 to 2013.
• A minimum of 1-year post op follow-up.
• Retrospective chart review established comorbidities at the time of surgery, side of surgery, type of surgery, complications and post-resection pathology.
Methods (continued)

- Telephonic interviews guided by a structured questionnaire assessed motivation to consider surgery, satisfaction with surgery, post-op seizure freedom and life satisfaction
- Seizure outcome was recorded according to Engel Classification
  - Class I: seizure free or auras only.
  - Class II: nocturnal or rare
  - Class III: improved

A modified Liverpool Life Satisfaction (LLS tool) was administered to measure patients views on life changes in the spheres of health, social and family relationships, and general happiness

- Scale was adjusted to exclude questions related to work satisfaction and job security

Results - Demographics

- 12 patients (3 males) aged ≥60 years
- The majority of patients were offered a standard anteromesial temporal lobe resection (9 right-sided and 1 left-sided)
  - One patient underwent a left temporal lesionectomy sparing the mesial structures
  - One case involved the resection of a right frontal lesion

Results - Demographics

- Mean age at surgery ES was 65 +/- 4.2 years (range 60-74 years)
- The mean age of seizure onset was 38.2 +/- 13.8 (range 21-61 years)
- The mean duration of epilepsy prior to surgery was 26.9 +/- 15.2 years (range 1-48 years)
- Two patients with tumors and brief histories underwent ES within 1-3 years of seizure onset
- One death at 20 months post op

Reasons for Not Considering ES Earlier

- (N=10)
- 5/10, 50% Never offered surgery previously
- 4/10, 40% Fear of surgery/denial about severity of seizures
- 1/10, 10% First surgery failed

Falls a Major Morbidity in Older Patients

- Falls were a strong motivator for considering surgery
  - 6/11 patients interviewed had seizure-related falls prior to RES
- Post-surgical falls were recorded for patients not sz free (n=3) and in those with low life satisfaction scores
  - Under-studied area
Outcome: Seizure Freedom

- Patients were followed for a mean of 5.9 years (range 1-15 years)
- At follow up, 9/12 patients (75%) were documented as having excellent post surgical outcome (Engel class I)

Outcomes: Satisfaction with Surgery

- 8 patients (72.7%) noted excellent satisfaction with surgery, good n=2 (7.1%) and poor n=1 (3.6%)
- 5 (45.5%) noted postoperative improvements in overall health
- 9/10 with long standing epilepsy would have considered surgery earlier
  - This included one patient who was not completely satisfied with her postoperative seizure outcome

Outcome: Life satisfaction (LLS) (n=11)

- Mean LLS score was 26.7±6 (range 10-31)
- Shorter duration of epilepsy (≤30 years) prior to surgery correlated with improved LSS (29 vs 24.8) (p<0.0005)
- Seizure freedom (Engel Class I) correlated with higher LLS scores (Class I n=8 with mean LLS score 28.5 versus those with Class II-III n=3 with mean LLS score 22) (p=0.048)
Factors Influencing LLS

- Being happily married and feeling socially connected led to higher LLS.
- Negative influences correlated with low LLS scores: falls and fractures; mood swings; feeling socially isolated/lacking a close friend; poor general health; cognitive and memory problems; and poor family relationships.
- High LLS scores in older patients were encountered despite a lack of changes in the spheres of driving and working.

Highlights of Our Study

- Our series adds to the body of literature that older patients are just as likely to be rendered seizure free by ES as their younger counterparts.
- Duration does not negatively influence outcome.
- Seizure freedom in older age may increase safety, independence, and life satisfaction, so that surgery is an important consideration.
- Satisfactory outcomes in older patients may be independent of driving and working.

Benefits of Seizure Freedom in Elderly

- Potential benefit of ES includes reduced use of anti-seizure drugs.
- Seizure drugs in older patients increase risks for impaired cognition, dizziness, osteoporosis, imbalance, and drug interactions.
- Reduction/elimination of anti-seizure drugs may substantially lower the risk of drug toxicity, osteoporosis, falls, and fractures.
- This potential benefit deserves in-depth study in larger cohorts of older patients following ES.

References:

Benefits: in their own words…

- … he is “more sociable, more coordinated, happier and more alert … a different man …” (65 yr old with sz for 44 years)
- … having surgery was “like lifting the world off my shoulders” (68 yr old with sz for 10 years, sz free and off AED’s)

Limitations

- Small sample
- Life satisfaction scores are best done before and after surgery
- Variable length of follow-up

Conclusions

- Surgery is safe and effective in patients ≥60 years of age
- Over 75% of patients in our cohort had a good surgical outcome (Engel Class I)
- It is anticipated that, as the population ages, the need to consider surgery for older people with epilepsy will increase
- Goal should be to identify surgical patients earlier to avoid decades lost to disability
Conclusions

- Older patients with refractory epilepsy represent a unique and understudied population.
- Our study emphasizes the need for life stage appropriate measures of QOL (adjusting for driving and working).

References