



ELSEVIER

Contents lists available at ScienceDirect

## Seizure: European Journal of Epilepsy

journal homepage: [www.elsevier.com/locate/seizure](http://www.elsevier.com/locate/seizure)

## Letter to the Editor

## Re: Establishment of low cost epilepsy surgery centers in resource poor settings



## To the Editor

I read with interest the article by Jukkarwala et al. entitled: “Establishment of low cost epilepsy surgery centers in resource poor setting” [1]. I agree with their conclusion that “It is possible to establish successful epilepsy surgery programs in resource poor setting with reasonable costs” [1]. However, I would like to suggest a strategy to reduce the costs substantially compared with their achievement of USD 1324 per patient. In a previous review in 2008, we suggested strategies to develop epilepsy surgery centers in the developing countries [2]. We followed that strategy and established a successful epilepsy surgery program in Shiraz, Iran, in 2009 [3]. Since then, we have operated many patients with drug-resistant epilepsy with success rates comparable to the results from well-equipped and well-established western centers [4,5]. At our epilepsy surgery center in Shiraz, we can only perform daytime video-electroencephalography (EEG) monitoring for two hours. We also have 1.5 Tesla magnetic resonance imaging (MRI) with an epilepsy protocol [4]. Despite all shortcomings, we have been able to offer epilepsy surgery to many patients, who needed it, based upon the accurate identification of good surgical candidates and without jeopardizing their safety. This has resulted in total costs of outpatient assessments, inpatient assessments (presurgical evaluations) and operation to be less than \$500 at our center [3]. Detection of ideal candidates for epilepsy surgery is possible for well-trained epileptologists with the help of basic investigative technologies (i.e., short-term EEG monitoring and MRI). Patients with potentially epileptogenic, well-circumscribed brain lesions on MRI and also those with mesial temporal lobe epilepsy are reasonable candidates for surgery [4]. In addition, palliative epilepsy surgeries including corpus callosotomy are also doable in these settings [5]. These kind of epilepsy surgeries are feasible in developing countries if they have a knowledgeable team consisting of an epileptologist, neurosurgeon and technicians and with

using MRI and EEG as the basic investigative technologies [2]. This strategy has proven to be effective and cost saving.

## Conflict of interest

None.

## Acknowledgments

None. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## References

- [1] Jukkarwala A, Baheti NN, Dhakoji A, et al. Establishment of low cost epilepsy surgery centers in resource poor setting. *Seizure* 2019;69:245–50.
- [2] Asadi-Pooya AA, Sperling MR. Strategies for surgical treatment of epilepsies in developing countries. *Epilepsia* 2008;49:381–5.
- [3] Asadi-Pooya AA, Ashjazadeh N, Kamgarpour A, et al. Management of epilepsy in resource-limited areas: establishing an epilepsy surgery program in Iran. *Med J Islam Repub Iran* 2014;28:24.
- [4] Asadi-Pooya AA, Rakei SM, Kamgarpour A, et al. Outcome after temporal lobectomy in patients with medically-refractory mesial temporal epilepsy in Iran. *J Neurosurg Sci* 2017;61:277–82.
- [5] Asadi-Pooya AA, Malekmohamadi Z, Kamgarpour A, et al. Corpus callosotomy is a valuable therapeutic option for patients with Lennox-Gastaut syndrome and medically refractory seizures. *Epilepsy Behav* 2013;29:285–8.

Ali A. Asadi-Pooya<sup>a,b,\*</sup><sup>a</sup> Neuroscience Research Center, Shiraz Medical School, Shiraz University of Medical Sciences, Shiraz, Iran<sup>b</sup> Jefferson Comprehensive Epilepsy Center, Department of Neurology, Thomas Jefferson University, Philadelphia, Pennsylvania, PA, USAE-mail address: [aliasadipooya@yahoo.com](mailto:aliasadipooya@yahoo.com).

\* Correspondence address: Neuroscience Research Center, Shiraz Medical School, Shiraz University of Medical Sciences, Shiraz, Iran.