

## The Bulletin from the Clinical Pharmacist

- The information below is a hypothetical case example of a patient experiencing breakthrough adverse reactions once in a while who is on multiple medications which might be the reason for additional problem to patient.
- A 57-years female patient had a known history of Trigeminal Neuralgia left V<sub>2</sub> (Maxillary nerve) for 2 years. She has been on multiple drugs like Ox-carbamazepine, Pregabalin and Dothiepin for past 2 years. She was asymptomatic for 1 year, again recurrence of pain while brushing teeth and eating.
- She recently had a complaint of slurring of speech and weakness of right upper limb, Echo report showed fast ventricular rate and possible embolic stroke. Drugs was changed and patient recovered.
- While again patient had complaint of headache, palpitation, while coughing, Patient was tachypneic.

### ***Clinical findings:***

***ECG showed AF with RVR.***

### ***Discussion:***

- Pregabalin is an anticonvulsant and is also used to treat neuropathic pain (pain caused by nerve damage). Since trigeminal neuralgia is a form of neuropathic pain, pregabalin is effective in controlling and reducing the intensity of the pain.
- Some AEDs (Ox-carbamazepine) are primarily developed for blocking neuronal ion channels, e.g., voltage-gated channels. Importantly, neuronal and cardiac ion channel isoforms are highly homologous. Thus, **AEDs may not only affect neuronal electrical activity but may also act on cardiac ion channels, thereby causing cardiac arrhythmias.**
- In elderly patients free of cardiovascular disease, exposure to gabapentin or to pregabalin or ox carbamazepine may be associated with **an increased risk of AF.**
- The drugs given for trigeminal neuralgia possibly would had caused **Atrial Fibrillation** for this patient.
- **A radiofrequency ablation** could be an effective option for this patient.
- Radiofrequency ablation (RFA) is a minimally invasive procedure used to treat trigeminal neuralgia (TN), a condition causing severe facial pain. During RFA, a needle is inserted near the trigeminal nerve, and a radiofrequency current is used to selectively damage the nerve fibers transmitting pain.