Palliative Meds Info
tel: 01 4912578
palliativemedsinfo@olh.ie

Our Lady's Hospice & Care Services
Respite Rehabilitation Reassurance
Harold's Cross & Blackrock

Risk of seizures in anti-emetics/anti-secretory agents

July 2019

Summary

It is difficult to conclusively recommend one anti-emetic or anti-secretory agent over another for the management of patients with a seizure risk. In every case, the patient's need and relative seizure risk should be assessed on an individual basis.

In terms of **anti-secretory** agents, it appears that **glycopyrronium** carries a low risk of causing seizures which is expected given that it does not cross the blood brain barrier. In high risk patients, this probably represents the anti-secretory agent of choice given that there are no proven superiorities/inferiorities among the three available agents.

In the case of **anti-emetic** choice, the picture is far more complex given the differing mechanisms of action of the medicines and indeed the differing processes causing nausea and vomiting. In general, **cyclizine** appears to be a reasonably safe. Where an antipsychotic agent is deemed necessary, haloperidol is less likely to reduce the seizure threshold than levomepromazine, but should still be used with caution. Note that the use of metoclopramide is contra-indicated in patients with epilepsy.

Table: Risk of seizures in anti-emetics/anti-secretory agents

Drug	BNF[1]	SPC[2]	Martindale[3]	AHFS[4]	Micromedex[5]
Metoclopramide	Rare or very rare	Rare (↑ risk in epileptic patients) ***Contraindication***: Epilepsy (↑ crises frequency & intensity)	Metoclopramide is ***not recommended*** for use in patients with epilepsy as the frequency and severity of seizures may be ↑.	Seizures have been reported rarely, although a causal relationship to metoclopramide has not been established. Metoclopramide is ***contraindicated*** in patients with a history of seizure disorders since the frequency and severity of seizures may be ↑.	***Contraindication***: Epilepsy (↑ risk of severity and/or frequency of seizures)
Cyclizine	Frequency not known	Frequency not known Use with ***caution*** and appropriate monitoring in patients with epilepsy	-	-	-
Haloperidol	Common or very common Use with ***caution*** in conditions predisposing to seizures	Uncommon It has been reported that seizures can be triggered by haloperidol. ***Caution*** is advised in patients suffering from epilepsy and in conditions predisposing to seizures (e.g., alcohol withdrawal and brain damage).	*Antipsychotics* Greatest risk of ↓ seizure threshold: at start of therapy; high doses; abrupt ↑ of dose or use of more than one antipsychotic. Incidence likely <1%	*Haloperidol* Since haloperidol may ↓ the seizure threshold, the drug should be used with ***caution*** in patients receiving anticonvulsant agents and in those with a history of seizures or EEG abnormalities. Adequate anticonvulsant therapy should be maintained during administration of haloperidol. *Antipsychotics* Some authorities recommend that the agent be withdrawn or the dosage reduced by 50% until a neurologic examination can be completed	*Haloperidol* Use ***caution*** in patients with history of seizures, EEG abnormalities, or receiving anticonvulsants because of possible ↓ seizure threshold *Antipsychotics* Low potency phenothiazines (e.g. levomepromazine) are more likely to ↓ the seizure threshold than the high potency antipsychotics (e.g. haloperidol, prochlorperazine). Antipsychotics can ↓ the seizure threshold and ↓ the efficacy of anticonvulsants
Levo-mepromazine	Common or very common Use with ***caution*** in conditions predisposing to seizures	Uncommon Use with ***caution*** in epileptic patients as levomepromazine may ↓ the seizure threshold. Treatment must be discontinued if seizures occur.			
Ondansetron	Uncommon	Uncommon	Seizures have been reported	Seizures (including tonic-clonic seizures) have been reported rarely	Tonic-clonic seizure <2%
Hyoscine hydrobromide	Frequency not known with oral use	***Caution*** is required in patients with epilepsy	*Hyoscine* ***Caution*** has been advised in elderly patients & in patients with impaired liver, or kidney function, as adverse CNS effects have been stated to be more likely in these patients. There have been rare reports of ↑ frequency of seizures in epileptic patients.	-	May aggravate seizures
Hyoscine butylbromide	-	-		-	-
Glycopyrronium	-	-	-	-	Seizure <2%

References

1) British National Formulary. Accessed on 02/01/2019. Available from www.medicinescomplete.com
2) Summary of Product Characteristics. Accessed online on 03/07/2019. Available from www.hpra.ie
3) Martindale: The Complete Drug Reference. Accessed online on 29/07/2019. Available from www.medicinescomplete.com
4) American Hospital Formulary Service Drug Information. Accessed on 03/01/2019. Available from www.medicinescomplete.com
5) Micromedex Solutions. Accessed on 04/01/2019. Available from www.micromedexsolutions.com