The DRESS Syndrome

Introduction

There has been an escalation in the use of psychotropic drugs. It leaves us as sedation practitioners with difficult decisions to make, especially for sedation outside the operating room when patients are on psychotropic drugs. How do we sedate the patients, and which drugs can we use safely.

One of the questions that we face, are the patients on psychotropic drugs, and sometimes combinations, really ASA 11 patients, or maybe fragile ASA 11 patients, "are they really controlled ASA 11 patients". Only when patients are ASA 11 patients they qualify for sedation outside the operating room.

The following abstract emphasizes the problems we as sedation practitioners may have during sedation in patients on psychotropic drugs. It shows that we may be faced in future with drugs that may cause significant adverse events and we need to be aware of this.

Abstract


DRESS syndrome: A rare and potentially lethal allergic reaction to carbamazepine. Werber A, Schiltenwolf M, Barié A.

A 64-year old man with chronic back pain was on the following drugs; tramadol, meloxicam and metamizole (an analgesic). Because of persistent pain carbamazepine (Tegretol®) was added.

Following 5 weeks of treatment, the patient developed maculo-papulose exanthema and fever, followed by hepatitis, leukocytosis and eosinophilia. A diagnosis was made of the so-called DRESS (drug rash with eosinophilia and systemic symptoms) syndrome, a severe anaphylactic reaction that can follow carbamazepine treatment.

Discussion

Already in 2001 Queyrel¹ published on two cases with the DRESS syndrome. The patients presented with severe febrile skin eruption following drug intake (carbamazepine or sulfazalazine), with hypereosinophilia and hepatitis. All symptoms resolved after drug
withdrawal and corticosteroid therapy. It was then realized that this syndrome can be fatal. Numerous drugs can be responsible for this reaction to medication.

In 2004 the authors reported the case of a 11-year-old girl hospitalized with an acute severe hepatitis revealing an oxcarbazepine-induced DRESS syndrome. DRESS syndrome is well described in adults treated with antiepileptic drugs (which fall under the classification of the psychotropic drugs) such as phenytoin, phenobarbital, and carbamazepine, but also with other drugs.

In 2008 four cases of a carbamazepine-induced drug reaction with eosinophilia and systemic symptoms (the DRESS syndrome) were reported. It was again stressed that this syndrome is a potentially life-threatening adverse drug reaction, and accidental re-exposure or drug provocation must be avoided.

In 2011 and article reported on the risk factors associated with the DRESS syndrome produced by antiepileptic drugs (AED). This article reports the incidence as 0.4 cases per 1,000,000 of the general population. Dress syndrome was diagnosed in eight patients between 2007 and 2010 at their hospital. The AED implicated were carbamazepine, lamotrigine, and phenytoin.

It seems that the DRESS syndrome is associated with especially the aromatic AED, but it is possible with other drugs.

**Conclusion**

It is important to recognize this entity recently called DRESS syndrome because it can mimic other pathologies, is potentially serious, and because withdrawal of the incriminating drug is imperative.

Carbamazepine (Tegretol®) is a well-known drug used in clinical practice for epilepsy, trigeminal neuralgia, bipolar disorders and neuropathic pain.

As sedation practitioners we need to be aware of the possibility of adverse events i.e., the DRESS syndrome, when patients on psychotropic drugs present for sedation.

I like to use the drug tramadol for use during procedural sedation and analgesia; however I never use the drug on patients taking psychotropic drugs. It is quite interesting that tramadol was used in the case report on the DRESS syndrome.

Cases like this again show the value of a pre-sedation assessment.
A 64-year-old man with chronic low back pain had been treated with tramadol, meloxicam and metamizole for several years. Due to additional neuropathic pain in the lower extremities, the medication was complemented with carbamazepine.

Immunosuppressive therapy was complicated by an additional septic reaction. After recovery, the patient was referred to our clinic for a multimodal pain therapy. Fear, depressive episodes and fear-avoidance behavior were additional social factors responsible for the chronic pain syndrome of the patient. The previously diagnosed neuropathic pain syndrome cannot be verified.

After appropriate modification of therapy, the patient's pain perception was significantly reduced, allowing for complete withdrawal of pain-relieving medication. This case report illustrates that merely pharmacological treatment of chronic pain syndromes bears only little prospect of success but increased risk of side effects.