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Confusion between valGANciclovir (Valcyte®) and vALAcyclovir (Valtrex®)

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Confusion when prescribing, administering or supplying drugs is frequent in hospitals and in the community. "Sound-alike" or "look-alike" drugs increase the risk of confusion [1–3]. According to the Swiss Foundation for Patient Safety, reporting of drug confusion accounts for 7% of all received CIRRNET clinical incidents (Critical Incident Reporting & Reacting NETwork) [4]. Several organisations have developed warnings and recommendations about the risks of confusion associated with brand names and nonproprietary names (INN) names [2, 4]. The Institute for Safe Medication Practices (ISMP) published a list of hazardous drug names and recommends the use of capital letters to highlight specifically a part of the name ("Tall man lettering") [5].

We report two adverse events that occurred recently in our hospital and in a community pharmacy with prescriptions of Valcyte® (valganciclovir) and Valtrex® (valacyclovir). The first event concerned a medical prescription received by the hospital pharmacist for a paediatric inpatient. The order specified the compounding of "valganciclovir syrup (Valtrex® 500 mg 1x / day)" instead of "valganciclovir suspension (Valcyte®)". The error was detected and a phone call to the prescriber allowed clarification of which product and pharmaceutical form were to be prepared. This event had fortunately no consequences for the patient.

The second event involved a newborn with congenital cytomegalovirus (CMV) infection. At hospital discharge, he was prescribed oral valganciclovir (16 mg/kg/dose 2 times per day). Due to misinterpretation of the prescription, a suspension of valacyclovir was prepared by the community pharmacist and delivered after a few days to the patient's mother. The error was only detected when the patient's mother ordered the second vial of suspension in another pharmacy and was surprised by a 20 times increase of the price (one tablet of Valcyte (valganciclovir) 450 mg costs 43.30 CHF when one tablet of Valtrex (valacyclovir) 500 mg costs 2.30 CHF). A wrong and inefficient treatment was administered for several days to the newborn that underwent unnecessary blood sampling for toxicity monitoring. Follow-up over months will be necessary before clinical impact on his neurodevelopment, especially his visual and hearing functions, can be established [6].

Valacyclovir (Valtrex®) is mainly used in children to treat severe chickenpox or herpes simplex virus infection. Its use for CMV prophylaxis is not recommended by experts although this indication is mentioned in the Swiss official information [7].

Neonatal and paediatric use of Valtrex® and Valcyte® are off-label. Liquid forms are not available on the Swiss market and have to be compounded from capsules by the hospital or community pharmacies. Compounding of drugs, especially if they are toxic like valganciclovir, requires dedicated area and protective measures. Community pharmacists might not be equipped and used to perform such compounding.

Confusion between sound-alike drugs may occur frequently, with all healthcare professionals, and at any stage of the medication process in the hospital or at discharge [3]. In the case of Valcyte® and Valtrex®, both drugs may be confused easily due to similar brand names, but also similar INN and indications. Moreover, they are not commonly used in the community and not widely familiar to healthcare professionals. To reduce the risk of confusion in our hospital, we have introduced the use of "Tall Letter" into the electronic prescribing system. Concerning Valcyte®, we are now importing a liquid form from Germany to facilitate compounding.

Due to a lack of neonatal suited and paediatric formulations, Swiss hospital and community pharmacies have to frequently compound or import drugs (so-called "unlicensed drugs") . Use of such drugs may be of concern in terms of drug information (no leaflet or in another language), continuity of care (availability in community pharmacy, reimbursement) and patient safety. Warning by healthcare professionals, drug industry and health authorities is necessary in order to improve patient safety. More efforts have to be made towards a national harmonisation of paediatric dosages, labeling of drugs, and centralisation of compounding. The paediatric working group of the Swiss Association of Public Health Administration and Hospital Pharmacists (GSASA) has recently taken some initiatives in this direction [8, 9].

When prescribing valganciclovir (Valcyte®) or valacyclovir (Valtrex®), writing of brand names AND INN is

strongly recommended, as well as the treatment's indication if possible. Prescribers should be aware that these products are not common in the community and that their prescription will necessitate a compounding step or an import that may lead to an extended delay for delivery by community pharmacies. Accurate information to the patients and tight cooperation between healthcare professionals should help to reduce the risks of confusion and improve continuity of care.

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