

## Transdermal Buprenorphine A Viewpoint by Reinhard Sittl

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Buprenorphine is the second transdermal formulation of a strong opioid to be introduced into pain management, following the fentanyl transdermal therapeutic system. Although the two systems function in a similar manner, they differ from each other not only in the contained opioids' profiles, but also in the technology of their transdermal delivery systems. While transdermal fentanyl uses the reservoir patch technology, the buprenorphine transdermal system (TDS) is a matrix system. In a matrix system, the substance is an integral part of the polymer structure of the patch, rendering the buprenorphine patch more robust in handling. While damaging the reservoir patch might result in 'dose-dumping' and potentially overdosing the patient, damaging a matrix patch does not interfere with the controlled release of the drug.

Based on currently available clinical trial data and personal clinical experience, transdermal buprenorphine seems a valuable alternative to other avail-

able opioids in many chronic pain conditions. Neither the switch of former opioid recipients to therapy with transdermal buprenorphine, nor initiating therapy with buprenorphine TDS in opioid-naïve patients seems to be problematic, except for a certain prevalence of nausea and vomiting at the start of therapy in opioid-naïve individuals. However, as these are well known and expected opioid adverse effects, they can be readily treated with standard anti-emetics and tend to subside with time as tolerance develops.

Despite good experience so far, more controlled trials are needed to find the place of transdermal buprenorphine among current treatment strategies for chronic pain, to explore if and how transdermal buprenorphine can be of value in difficult pain conditions (for example neuropathic pain), or which place it could take in opioid rotation schemes in cancer pain treatment. Nevertheless, it is already evident that patients and nursing staff like the new patch; it is easy to handle, has a long-lasting effect, promotes sleep and can reduce medication overload, thus contributing to an improved quality of life. ▲