Each subject received single doses of DRG 5 mg, DRG 12.5 mg, DRG 20 mg, and DBF 15 mg.

The following search protocol was used: (“diazepam”[title/abstract] AND “absorption”[title/abstract] AND “rectal”[title/abstract]).

Until recently, diazepam rectal gel (DRG) was the only FDA-approved treatment for the management of selected patients with epilepsy who experience bouts of increased seizure activity. Despite treatment with anti-epilepsy drugs, and rapid treatment of these seizures is required for many patients with epilepsy, breakthrough seizures or cluster seizures continue to occur.

The route of administration for DRG presents challenges for patients and caregivers, as it may be more difficult and time consuming to administer than rectal medications. Rectal administration can also cause embarrassment and may be less socially acceptable than other forms of treatment.

Diazepam buccal film (DBF) is a novel formulation of diazepam under development as a therapeutic alternative to DRG for the treatment of breakthrough or cluster seizures.

We conducted a search of the PubMed database (from database inception to September 18, 2019) to identify primary studies of rectal absorption of diazepam. These findings were consistent with observations from a recent comparative bioavailability study of DBF and DRG, in which some subjects had extremely low diazepam exposure.

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