doi:10.36849/JDD.S0721

Why Absorica LD?

Leon H. Kircik MD

For close to four decades, isotretinoin has been a mainstay treatment for severe nodular acne. It was the first and still remains the only oral therapy shown to address all four pathogenic factors of acne including hyper-keratinization, sebum production, *Cutibacterium acnes* proliferation, and inflammation.[1,2]

Those of us who prescribe isotretinoin can likely recount stories of patients for whom the therapy made a significant impact not only on their disease, but on their life. Patients with severe nodular acne—those for whom isotretinoin is indicated[3]—may report physical discomfort, as well as embarrassment and impaired self-esteem, as a result of the condition. Isotretinoin is also commonly prescribed for moderate acne that is treatment-resistant or poses significant risk for physical scarring or psychosocial distress. When their acne is finally brought under control, these patients tend to be highly satisfied with therapy and so grateful to their dermatology providers.

A historical limitation of treatment with isotretinoin has been the bioavailability of standard oral formulations. Isotretinoin is a lipophilic molecule. As such, absorption has been impacted by the consumption—or non-consumption—of high-fat foods at the time of medicine administration. This had led us to advise our patients to take isotretinoin with a high-fat meal. Ironically, one of the possible adverse events of isotretinoin is increased lipids, especially triglycerides, which may lead to acute pancreatitis. In an effort to enhance absorption of isotretinoin independent of diet—thus reducing the onus on the patient—Absorica, featuring Lidose technology, was developed and came to market in 2012. Lidose lipid encapsulation technology allowed isotretinoin to be partially pre-solubilized in a lipid matrix, enhancing absorption even if the drug is not taken with fatty foods.

Approved by the FDA in 2019, a new and different technological innovation has further enhanced the bioavailability of isotretinoin without depending on dietary factors. Absorica LD is a unique formulation featuring micronized technology that actually reduces the size of isotretinoin. The result of this technological innovation is that the micronized drug is absorbed more efficiently in the gut—whether taken with food or in a fasted state. Several studies, as described and discussed in the pages ahead, demonstrate that the absorption of Absorica LD is superior to Absorica. In fact, compared to the older Absorica 40mg, Absorica LD 32mg is bioequivalent when taken with food. Actually, micronized drug absorption is doubled for Absorica LD compared to Absorica when taken without food.[4]

The availability of Absorica LD offers practical benefits. Because micronization improves isotretinoin absorption levels, it is possible to decrease the cumulative dose of isotretinoin required for a patient taking Absorica LD, compared to generic isotretinoin. It is worth noting that the American Academy of Dermatology (AAD) currently recommends a target cumulative dose for isotretinoin in the treatment of moderate to severe nodular acne of 120–150mg/kg. A lower relapse rate was seen for those treated with a cumulative dose of 120mg/kg and the therapeutic benefit may plateau at 150mg/kg.[3] From a practical perspective, since the mg dosage of micronized Absorica LD is 20% less than conventional isotretinoin and old Absorica (with Lidose technology), and achieves similar drug levels under fed conditions, the target cumulative dose could be decreased by 20% as well to 100mg/kg–120mg/kg.[3]

In the past, dermatology providers advised their patients to take conventional isotretinoin with a high-fat meal in order to optimize drug absorption. We know such recommendations can be challenging for patients—especially adolescents—to adhere to on a daily basis, especially when patients may not eat a consistently-timed morning meal. Not to mention, such guidance may not encourage healthy eating habits. With Absorica LD, our patients no longer need to focus on administering isotretinoin in conjunction with a high-fat meal.

doi:10.36849/JDD.S0721

There are many patients with severe nodulocystic acne or potentially scarring acne for whom isotretinoin therapy should be implemented as early as possible in the disease course. Early intervention can reduce the risk for scarring, diminish patient discomfort, and minimize the psychosocial impact of the disease. For those patients for whom isotretinoin is an appropriate treatment option, Absorica LD, which has no legally substitutable product, may offer distinct advantages over other formulations of the drug.

Leon H. Kircik MD
Icahn School of Medicine at Mount Sinai, New York, NY
Indiana University Medical Center, Indianapolis, IN
Physicians Skin Care, PLLC, Louisville, KY
DermResearch, PLLC, Louisville, KY
Skin Sciences, PLLC, Louisville, KY

DISCLOSURE

Leon H. Kircik MD has received compensation from JDD for his editorial support and serves as either a speaker, investigator, consultant, or an advisory board member for Sun Pharma.

REFERENCES

1. Brelsford M, Beute TC. Preventing and managing the side effects of isotretinoin. *Semin Cutan Med Surg.* Sep 2008;27(3):197-206.
2. Williams HC, Dellavalle RP, Garner S. Acne vulgaris. *Lancet.* 2012;379(9813):361-372.
3. Zaenglein AL, Pathy AL, Schlosser BJ, et al. Guidelines of care for the management of acne vulgaris. *J Am Acad Dermatol.* 2016;74(5):945-973.
4. Madan S, Kumar S, Segal J. Comparative pharmacokinetic profiles of a novel low-dose micronized-isotretinoin 32 mg formulation and lidose-isotretinoin 40 mg in fed and fasted conditions: Two open-label, randomized, crossover studies in healthy adult participants. *Acta Derm Venereol.* Feb 2020;100(4):adv00049.