BULEVIRTIDE FOR CHRONIC HEPATITIS D: A REVIEW OF CURRENT EVIDENCE

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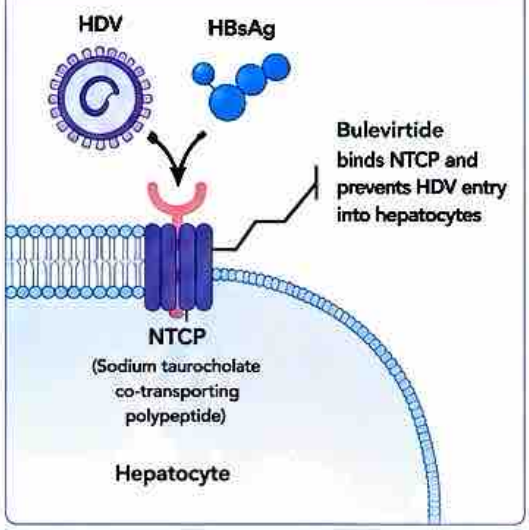
BACKGROUND

- Hepatitis D virus (HDV) infection requires HBV co-infection and affects nearly 5% (an estimated 12 million) of individuals with chronic HBV infection worldwide.
- HDV infection frequently leads to end-stage liver disease and hepatocellular carcinoma.
- Therapeutic options are limited. Bulevirtide, an entry inhibitor that blocks HDV attachment to hepatocytes via sodium taurocholate co-transporting polypeptide (NTCP), offers a targeted antiviral approach.

MECHANISM OF ACTION

Bulevirtide *(Mycludex B)*



OBJECTIVE

To assess the effectiveness of bulevirtide in patients with chronic hepatitis D.

MATERIALS AND METHODS

- This study analyses clinical trials to determine the benefits of bulevirtide in patients infected with chronic hepatitis D.
- Virological and biochemical responses to different doses of bulevirtide were evaluated.
- Efficacy of bulevirtide as monotherapy and in combination with peginterferon (PEG-IFN) was analysed.
- Primary outcomes: Combined virological and biochemical response (MYR301); Undetectable HDV RNA 24 weeks post-treatment (MYR204).

METHODOLOGY

CLINICAL EVIDENCE
Clinical trials evaluating bulevirtide in chronic hepatitis D.

INTERVENTIONS
Bulevirtide at different doses as monotherapy and in combination with peginterferon.

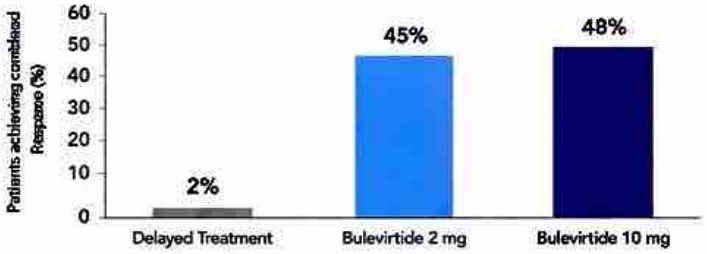
OUTCOMES
Virological and biochemical responses, including HDV RNA reduction.

EVIDENCE REVIEWED
Phase III MYR301 and randomized phase IIb MYR204.

EMERGING CLINICAL EVIDENCE

1. Phase III MYR301 Trial – Combined Virological & Biochemical Response at Week 48

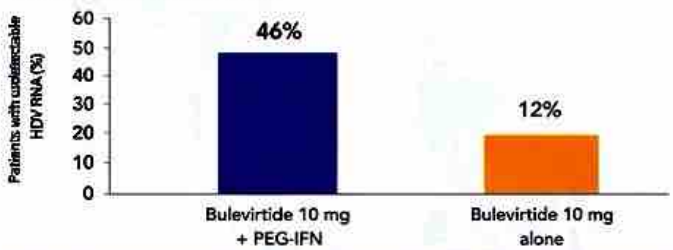
- Bulevirtide achieved combined virological and biochemical response in more patients compared with delayed-treatment group.



At week 48, combined virological and biochemical responses were achieved in 45% with 2 mg and 48% with 10 mg bulevirtide, compared with 2% in delayed-treatment group.

2. Randomized Phase IIb MYR204 – Undetectable HDV RNA 24 Weeks Post-Treatment

- Bulevirtide 10 mg plus peginterferon achieved higher rates of undetectable HDV RNA compared with bulevirtide alone.



At 24 weeks post-treatment, undetectable HDV RNA was achieved in 46% of patients with bulevirtide 10 mg plus PEG-IFN, compared with 12% with bulevirtide alone.

CLINICAL IMPLICATIONS

- Bulevirtide improves virological and biochemical responses in chronic hepatitis D.
- Combination with peginterferon may enhance virological responses compared with monotherapy.
- Bulevirtide demonstrates robust antiviral activity and sustained treatment response.
- These findings suggest bulevirtide can be an effective treatment option for patients with chronic hepatitis D.

EVIDENCE GAPS & FUTURE DIRECTIONS

LARGER RANDOMIZED TRIALS	Needed to confirm long-term efficacy and safety in diverse populations.
LONGER FOLLOW-UP	To assess durability of response and long-term outcomes.
PATIENT SELECTION	Identification of predictors of response and optimal patient subgroups.
OPTIMAL COMBINATION	Define best combination partners, duration and sequencing.
SAFETY	Continued monitoring for long-term safety and rare adverse events.

CONCLUSION

- Bulevirtide is a promising treatment for chronic hepatitis D.
- It improves virological and biochemical responses, with better results seen when combined with peginterferon.
- Clinical trials show good antiviral activity and sustained treatment response.
- These findings suggest that bulevirtide can be an effective treatment option for patients with chronic hepatitis D.

REFERENCES

- Wedemeyer H, Saeed U, Manns M, et al. Bulevirtide for chronic hepatitis delta virus infection. N Engl J Med. 2023;389(19):1777-1789.
- Yurdaydin C, Abbas Z, Buti M, et al. Bulevirtide with peginterferon alfa in patients with chronic hepatitis delta: A randomized phase IIb trial (MYR204). N Engl J Med. 2023;389(2):143-153.