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Navigating a Paradigm Shift: Lerodalcibep in Patients with Cardiovascular Diseases as an Alternative to Monoclonal Antibodies (PCSK9 Inhibitors)

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Nearly 17.5 million deaths globally are attributed to non-communicable disease (NCD) causes, with cardiovascular disease (CVD) being the main culprit. Low-density lipoprotein cholesterol (LDL-C) medications are now available, but cardiovascular disease (CVD) still causes a considerable amount of morbidity and mortality, especially in patients who may not respond well to existing treatments. In this regard, significant progress has been made in reducing LDL-C levels and, consequently, the risk of CVD with monoclonal antibodies that inhibit proprotein convertase subtilisin/kexin type 9 (PCSK9). Even with these medications, more easily available, reasonably priced, and patient-friendly substitutes are still required. [1]

The LIBERATE Phase 3 worldwide clinical trial, which was conducted recently, observed that lerodalcibep, which is a PCSK9 fusion protein – Human Serum Albumin, has proven useful in lowering the LDL-C levels even in patients with heterozygous familial hypercholesterolemia. During the trial, almost 90% of patients had experienced more than 50% reduction in LDL-C levels and most were able to reach the acceptable levels of LDL-C with the subcutaneous dose of 300 mg each month. This data substantiates that lerodalcibep can emerge as a revolutionary therapeutic agent in the management of dyslipidemia as it provides a new treatment option, especially in those who demand greater LDL-C reduction than what PCSK9 monoclonal antibodies can offer. In another research performed by Raal et al., regarding patients taking lerodalcibep for a 24-week period, 68% of study participants did have at least a 50% reduction in their LDL-C levels, indicating the long-term benefits of this new drug. Lerodalcibep could be more effective than monthly doses of other PCSK9 inhibitors where dose escalation is limited due to high costs which makes these alternatives regarded as quite burdensome. [2]

Some concerns regarding the common utility of PCSK9 inhibitors such as high cost, dosing frequency, and side effects have been confirmed even with the novel introduction of these inhibitors. By contrast, the oral treatment of lerodalcibep appears more practical and possibly less expensive which makes it a useful agent in the treatment of LDL-C. Now a grim era in the treatment of dyslipidemia has been altered by its great effectiveness along with a better mode of administration which paves the way for the patients who failed other drugs. This new technology could

change the landscape regarding the treatment of cardiovascular disease across the globe especially in those who are at risk or have poor options with presently available drugs. As lerodalcibep information progresses, doctors and researchers must examine the available evidence for this novel agent to reduce cardiovascular risk and make future recommendations in clinical practice based on the evidence. [3]

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Author Contribution

All authors 1) made substantial contributions to conception and design, and acquisition of data; 2) drafted the article or revised it critically for important intellectual content; 3) gave final approval of the version to be published.

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