LONG TERM TREATMENT WITH RIOCIGUAT VS. SILDENAFIL COMPARISON IN CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION

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Objective:

Riociguat is recommended by ERS guidelines for treatment of inoperable chronic thromboembolic pulmonary hypertension (CTEPH) while sildenafil is used as an off-label drug. We aimed to compare long-term efficacy of riociguat and sildenafil.

Methods:

This retrospective observational study was conducted from October 2009 to January 2023. We analyzed the results of 6-minute walk test (6MWT) and WHO functional class (WHO FC) at baseline, at first and fourth therapy year.

Result:

We included patients with sufficient data for analysis - a total of 9 (2 female, age 51.3±15.5) patients treated with riociguat and 7 (2 female, age 61.9±9.6) patients treated with sildenafil. After the first year, we observed average rise in 6MWT result in both sildenafil (72.6±49.5m) and riociguat (46.1±66.2m) group. In this period, 6 riociguat patients improved WHO FC, 3 remained stable, while none worsened (66.7%/33.3%/0%); 4 sildenafil patients improved WHO FC, 3 remained stable and none worsened (57.1%/42.9/0%). Over the 4-year period, 6MWT change from baseline decreased in riociguat group (-27,2±71m), while sildenafil group kept the positive change from baseline (47.7±78.7m). During the observed period, 5 patients treated with riociguat had stable WHO FC, while 4 improved and none worsened (55.6%/44.4%/0); WHO FC remained stable for 2 patients and improved in 5 patients treated with sildenafil (28,6%/71,4%/0%). None of the patients discontinued therapy due to adverse effects.

Conclusion:

Both drugs show stable long-term outcomes. This study is limited to a small group of patients and further investigation is needed.