SMART and as-needed therapies in mild-to-severe asthma: a network meta-analysis

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As-needed therapy represents a suitable therapeutic option in the treatment of asthma, with single maintenance and reliever therapy and as-needed ICS/LABA being the most effective therapeutic options https://bit.ly/3dEIXh4


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ABSTRACT To date, there are no network meta-analyses comparing the impact of as-needed treatments in asthma, including the single maintenance and reliever therapy (known as “SMART” or “MART”; for simplicity, SMART will be used hereafter) and the use of inhaled corticosteroid (ICS)/long-acting β2-agonist (LABA) combination exclusively on an as-needed basis. Therefore, we performed a systematic review and network meta-analysis concerning the efficacy and safety of SMART and as-needed therapies in asthma. Data from 32,096 asthmatic patients were extracted from 21 studies, lasting from 6 to 12 months. In adult mild-to-moderate asthmatic patients low-dose SMART and as-needed low-dose ICS/LABA combination were significantly (relative effect <0.78; p<0.05) more effective than the other as-needed therapies in reducing the risk of exacerbation, and both were ranked as the first treatment option reaching the first quartile of the surface under the cumulative ranking curve analysis (SUCRA). In adult moderate-to-severe asthmatic patients, low-dose to medium-dose SMART and high-dose ICS/LABA+as-needed short-acting β2-agonist were equally effective in reducing the risk of severe asthma exacerbation (p>0.05), although only low- to medium-dose SMART was ranked as the first treatment option (first SUCRA quartile). Overall, these treatments were well tolerated, and effective also on lung function and disease control. This study supports SMART and as-needed therapies as a suitable therapeutic option for asthma, by providing the most effective positioning of each specific treatment according to the disease severity.