Tirzepatide a major breakthrough in treatment of obstructive sleep apnoea

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Madam, Obstructive sleep apnoea is common sleep abnormality in which the pharyngeal muscles relax causing the full blockage of the airway or partial leading to less oxygen supply to body which disturbs sleep resulting in sleep fragmentation and hypercapnia. This leads to many health problems like cardiac diseases and also has metabolic and neurocognitive affect.[1] According to the existing literature the most high risk factors for the obstructive sleep apnoea are metabolic syndrome related factors like obesity, diabetes, hypertension and lipid profile. Other risk factors include smoking alcohol consumption dietary habits and exercise routine also it's more common in men than in women.[2]

The existing treatment available for the OSA are continuous positive airways pressure and also through surgeries, weight control and dental devices.

These treatments do not resolve OSA abnormality completely and sometimes intolerable for many patients. With global rise in the obesity the OSA becomes more prevalent and has become major concern.

According to Malhutra and his colleagues the tirzepatide is potential treatment for the moderate to severe obstructive sleep apnoea patient and reduce the AHI (apnoea hypo apnoea index), body weight, hypoxic burden, hsCRP concentrations and systolic blood pressure and improved sleep related patient reported outcomes.[3] They conducted two phase 3 trial in which adults with moderated to severe OSA and obesity were involved. Trail 1 was participants with no positive air pressure treatment and trial 2 were participants taking positive air pressure treatments. They were assigned 1:1 ratio to receive maximum tolerable dose of tirzepatide (10mg or 15 mg) or placebo for 52 weeks. The primary end point was to study the change in AHI which is the number of apnoea hyper apnoea per hour of sleep. And the secondary end points were percent change in AHI and body weight and changes in hypoxic burden, patient-reported sleep impairment and disturbance, high-sensitivity C-reactive protein (hsCRP) concentration, and systolic pressure. After 52 weeks the participants those taking tirzepatide their AHI were effectively reduced as compared to those taking placebo and also the secondary end points mentioned were all improved. The most frequent reported adverse events with tirzepatide were gastrointestinal in nature and mostly mild to moderate in severity.

As in Pakistan where the obesity is prevalent which is high risk for OSA. So this new pharmaceutical therapy for OSA is very important to prevent the consequences and health issues resulting from it aforementioned. Most patients with OSA have problems with other treatments and they do not resolve the OSA completely so this new pharmaceutical therapy for treatment of OSA is very essential to prevent this common problem in our population.

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