

Assessment of the Effect of Orally Administered Itopride on Gall Bladder Ejection Fraction by a Fatty Meal Cholescintigraphy in Patients with Diabetes

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Abstract : Aim of the Study: To assess the effect of orally administered Itopride on gall bladder ejection fraction by fatty meal cholescintigraphy in patients with diabetes. Materials and Methods: Thirty patients (20 males, 10 females, mean age 46+10 yrs) with history of diabetes mellitus (mean duration 4.8+4.1 yrs, fasting blood glucose level 130+35 mg/dl and 2-hours post-prandial blood glucose level 196+76 mg/dl) and found to have gall bladder dysfunction on fatty-meal stimulated cholescintigraphy were selected for this study. These patients underwent a repeat cholescintigraphy similar to baseline study, with 50 mg of Itopride orally along with fatty meal. Pre- and post-Itopride GBEF were then compared to assess the effect of Itopride on gall bladder contraction. Results: Out of these 30 patients, 2 had dyskinetic, 4 had akinetic, 22 had moderately hypokinetic and the remaining 2 had hypokinetic gall bladder function in the baseline study with > 60% GBEF being taken as the normal value. Mean percentage of GBEF in the baseline study was 32%+13% and the mean percentage of GBEF in the post-Itopride study was 57%+17% with change in mean percentage of GBEF being 24%+21%. GBEF of the "baseline study" was significantly lower as compared to GBEF in the "post-Itopride study" ($p < 0.05$). Conclusion: Diabetic patients with biliary-type pain often tend to have impaired gallbladder function. Cholescintigraphy with fatty meal-stimulation is a simple, cheap and useful investigation for assessment of gallbladder dysfunction in these patients, before any structural changes occur within the lumen or wall of the gall bladder. Improvement in gallbladder ejection fraction after oral administration of a single dose of Itopride, a newer prokinetic drug with fewer side effects, as assessed by cholescintigraphy, provides enough evidence of future therapeutic response. Administration of Itopride, in therapeutic dosage, therefore may be expected to cause significant improvement in gallbladder ejection fraction and hence prolong stone formation within the gall bladder and also prevent the associated long term complications. Hence, based on scintigraphic evidence, Itopride may be recommended, by clinicians, for management of symptomatic diabetic patients having gallbladder dysfunction.

Keywords : itopride, gall bladder ejection fraction, fatty meal, cholescintigraphy, diabetes

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