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Abstract #1106

ULTRASONOGRAPHIC EVALUATION OF GALLBLADDER VOLUME IN TYPE 2 DIABETICS AND ITS CORRELATION WITH AUTONOMIC NEUROPATHY

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Objective: Ultrasonographic determination of gallbladder volume in type 2 diabetics with 5 to 10 year duration and its comparison with a control group and correlation of gallbladder volume in type 2 diabetics with parameters such as sex, body mass index, hyperlipidemia and autonomic neuropathy.

Methods: Fifty cases of diabetes mellitus and 50 healthy controls were recruited for the study. A detailed history was taken and physical examination was done. Laboratory investigations done were - fasting and postprandial blood sugar, glycosylated haemoglobin, and serum lipid Profile. Autonomic neuropathy was determined by using simple non-invasive bedside tests. Fasting gallbladder volume was measured by ultrasonography (calculated by ellipsoid formula).

Results: The mean fasting gall bladder volume has been detected as 29.20 ± 12.74 ml in diabetics with a minimum value of 10 and maximum value of 78 ml. and 17.50 ± 2.206 ml in control subjects. When type 2 diabetics were subgrouped according to the presence of autonomic neuropathy, higher gallbladder volumes were seen in patients with autonomic neuropathy.

Discussion: - Cholecystomegaly, to a significant degree, was documented in type 2 diabetics in the present study. It has been emphasized that duration of diabetes in these cases was 5 to 10 years. Gall bladder volume enlargement in type-2 diabetics as a whole is significantly correlated with age, BMI, total cholesterol, LDL, HDL, FBS, PPS, Hb1Ac and severity of autonomic neuropathy ($p < 0.001$). The mean gall bladder volume in type 2 female diabetics is higher than that found in type 2 male diabetics, but the difference in the gall bladder volume between the two sub groups is not statistically significant ($p > 0.05$).

Conclusion: Autonomic neuropathy is a major cause of diabetic cholecystopathy. Early screening for autonomic neuropathy can prevent the development of cholecystomegaly and subsequent development of gallstones.