

CORRELATION OF PROGRESSION OF LIVER PATHOLOGY (TOWARDS NASH) WITH GALL BLADDER DISEASE SYMPTOMATOLOGY

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A cohort of 100 gall bladder surgeries (*25 patients also having concomitant liver pathologies in cases with gross and laboratory indications*) over a five year period was retrospectively reviewed with a minimum of twelve month follow up. Correlations were sought between clinical symptoms, gross findings, gall bladder pathology and liver pathology. An correlation was found between liver pathology findings and clinical symptoms of gall bladder disease; however while imprecise, there is not a clear correlation between symptoms and gross gall bladder findings at surgery and/or gall bladder pathologies. Average age was rounded to 50 years; 27 were male and 73 female.

The study correlated gross findings of acute cholecystitis (*hydrops and/or severe adhesions and/or gangrene*) with both gross appearance of liver consistent with gross steatosis changes as well as progression of liver pathology (*in 25 liver biopsies performed*) towards NASH (Nonalcoholic Steatohepatitis: steatosis, inflammation and fibrosis: including frank cirrhosis and excess iron deposition).

Gall bladder pathology was not correlative as it did not correspond to any changes including presence of acute cholecystitis clinically. There were no clinical differences recorded between group with and those without stones; all cases were outpatient though five required subsequent admission for drainage of bilomas and one colon fistula but without any common duct injury.

The 25 liver biopsies performed based on gross and laboratory findings were positive for clinical findings in almost 90% of biopsies (3 nondiagnostic, 10 with steatosis, 6 with inflammation and 6 with fibrosis).

A total of 35 patients had gross acute cholecystitis findings; these patients had 14 of the 25 liver biopsies: this correlation is significant: This suggests the possibility of a hypothetical link between the etiology of gall bladder symptoms and/or gross findings at surgery and NASH etiology, notwithstanding the fact that gall bladder pathology itself does not correlate well with either symptoms or observed findings at surgery, which has frustrated research into this area.

These hypotheses could be explored with a protocol involving more precise classification of gall bladder disease with indications for liver pathology in a larger patient group. Liver disease may be important in determining response to surgery and to predict both future health issues and problems with recovery, as well as provide more understanding of the development of gall bladder dysfunction and symptoms, since gall bladder pathology itself does not correlate well with symptoms. In this cohort the single patient who developed a colon fistula had findings consistent with NASH on liver biopsy. Patients with liver changes were counselled with diet and GI referral.