Liver disease

Bibliographic reference	**Bardella et al. (2011)**
Study type	Cross-sectional survey
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html) 1. Was the sample representative of the target population? YES 2. Were study participants recruited in an appropriate way? YES (consecutive sample recruited) 3. Was the sample size adequate? YES 4. Were the study subjects and the setting described in detail? YES 5. Was the data analysis conducted with sufficient coverage of the identified sample? YES 6. Were objective, standard criteria used for the measurement of the condition? YES 7. Was the condition measured reliably? YES 8. Was there appropriate statistical analysis? YES 9. Are all important confounding factors/subgroups/differences identified and accounted for? YES 10. Were subpopulations identified using objective criteria? NA

	Overall risk of bias = LOW
Country	Italy
Number of patients	N=65 adult patients with primary biliary cirrhosis
Study population	Inclusion: consecutive patients with primary biliary cirrhosis seen during regular follow-up examination Mean age 59 years (range 35-67) 58 women, 7 men
Control	none
Details of coeliac testing	Serum IgA AGA (ELISA, Gluten IgA EIA Pharmacia, Uppsala, Sweden) EMA (indirect immunofluorescence, Eurospital, Trieste, Italy)
Results	0% (no signs of overt malabsorption, no family history of CD, 2 had positive IgA AGA but not EMA and negative biopsy)
Source of funding	Not reported
Conflicts of interest	Not reported
Comments	The study also included the rate of primary biliary cirrhosis in a group of patients with coeliac disease but this was not reproted here as it was not at or before the diagnosis of CD

Definitions of abbreviations are given at the end of this document.

Bibliographic reference	**Chatzicostas et al. (2002)**
Study type	Prospective case series
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html) 1. Was the sample representative of the target population? YES 2. Were study participants recruited in an appropriate way? NO – Unclear is consecutive sample recruited 3. Was the sample size adequate? YES 4. Were the study subjects and the setting described in detail? YES 5. Was the data analysis conducted with sufficient coverage of the identified sample? YES 6. Were objective, standard criteria used for the measurement of the condition? YES 7. Was the condition measured reliably? YES 8. Was there appropriate statistical analysis? YES

	9. Are all important confounding factors/subgroups/differences identified and accounted for? YES 10. Were subpopulations identified using objective criteria? NA Overall risk of bias = MODERATE
Country	Greece
Number of patients	N=62 adults with primary biliary cirrhosis N=17 adults autoimmune cholangitis
Study population	Inclusion: patients with primary biliary cirrhosis or autoimmune cholangitis Exclusion: biliary obstruction was ruled out with ultrasound, computed tomography and endoscopic retrograde cholangiography No patients had a family history of CD or IgA deficiency Primary biliary cirrhosis: mean age 59 years (range 32-85); 53 women and 9 men Autoimmune cholangitis: mean age 62 years (range 52-77); 16 women and 1 man
Control	100 blood donors were used as controls and 18 patients with CD but these are not extracted here as the blood donors did not receive biopsy and the results from the coeliac patients does not provide a helpful comparison
Details of coeliac testing	From prospectively stored sera over 2 years, the following serological tests were performed: Anti-gliandin (IgA and IgG; ELISA by Alphadia SA/NV, Belgium, values >50 U/ml were considered positive), anti-endomyosial IgA (with monkey oesophagus by Biosystems, Barcelona, Spain and human umbilical cord (Eurospital SpA, Treiste, Italy), anti-reticulin, and IgA class antibodies to guinea pig liver-derived tTG (ELISA kit from QUANTA Lite™ tTG, ELISA, INOVA Diagnostics, San Diego, USA) Small intestinal biopsy was performed if serology was positive
Results	Only 10 of 17 with primary biliary cirrhosis and 5 of 7 with autoimmune cholangitis who had positive serology were given biopsy (4 refused, 5 died shortly after testing positive) **0% had histological features suggestive of CD**
Source of funding	Not reported
Conflicts of interest	Paper reports that there are none
Comments	

Definitions of abbreviations are given at the end of this document.

Bibliographic reference	**Dickey et al. (1997)**
Study type	Cross-sectional survey
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html) 1. Was the sample representative of the target population? YES

	2. Were study participants recruited in an appropriate way? NO – Unclear is consecutive sample recruited 3. Was the sample size adequate? YES 4. Were the study subjects and the setting described in detail? YES 5. Was the data analysis conducted with sufficient coverage of the identified sample? YES 6. Were objective, standard criteria used for the measurement of the condition? YES 7. Was the condition measured reliably? YES 8. Was there appropriate statistical analysis? YES 9. Are all important confounding factors/subgroups/differences identified and accounted for? YES 10. Were subpopulations identified using objective criteria? NA Overall risk of bias = MODERATE
Country	Northern Ireland
Number of patients	N=57 adults with primary biliary cirrhosis
Study population	Inclusion: those attending clinics with primary biliary cirrhosis, N=52 female, mean age 57yrs (30 to 79yrs), none had low total serum IgA
Results	N=6 (11%) EMA +ve, N=4 biopsied all had results consistent with coeliac disease Prevalence of coeliac disease; 1:14 (7%)
Source of funding	Not reported
Conflicts of interest	
Comments	

Definitions of abbreviations are given at the end of this document.

Bibliographic reference	**Drastich et al. (2012)**
Study type	Cross-sectional survey
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html) 1. Was the sample representative of the target population? YES 2. Were study participants recruited in an appropriate way? NO – Unclear is consecutive sample recruited 3. Was the sample size adequate? YES 4. Were the study subjects and the setting described in detail? YES 5. Was the data analysis conducted with sufficient coverage of the identified sample? YES

	6. Were objective, standard criteria used for the measurement of the condition? YES 7. Was the condition measured reliably? YES 8. Was there appropriate statistical analysis? YES 9. Are all important confounding factors/subgroups/differences identified and accounted for? YES 10. Were subpopulations identified using objective criteria? NA Overall risk of bias = MODERATE
Country	Czech Republic
Number of patients	N=962 patients with liver diseases
Study population	Inclusion: patients treated in the Department of Hepatogastroenterology, Institute for Clinical and Experimental Medicine, Prague from 2009 to 2010. <u>Liver diseases:</u> - 152 alcoholic liver cirrhosis - 77 autoimmune hepatitis type I - 117viral hepatitis B - 147 viral hepatitis C - 31 Wilson's disease - 32 primary biliary cirrhosis - 59 primary sclerosing cholangitis - 23 nonalcoholic steatohepatitis - 132 liver steatosis - 14 Budd Chaiari syndrome - 10 polycystic liver - 168 others (drug-induced hepatitis, cryptogenic liver cirrhosis, hepatitis A, hepatocellular carcinoma, focal nodular hyperplasia, mild liver test abnormalities, etc) Mean age 55 years (range 21-76) 378 males, 290 females
Control	The methods of the study reported the use of a control group but results from these patients do not appear to be reported in the paper.
Details of coeliac testing	IgA and IgG anti-tTG (BINDAZYMETM anti-tTG EIA kid, The Binding Site, Birmingham, UK and ORG anti-tTG ELISA kids) Those positive were tested for IgA or IgG (if IgA immunodeficiency) isotypes of anti-AGA and EMA (IgG or IgA [AGA with QUANTA Lite Gliandin IgA or IgG, INOVA Diagnositic Inc, Sandiego, CA, USA and ELISA ANTI GLIANDIN MGP IgA and IgG, The Binding Site; EMA with indirect immunofluorescence with human umbilical cord tissue cryostat sections] Final diagnosis by biopsy
Results	**1.6% (16/962) had biopsy-confirmed CD** (these were 16 of 29 patients who were positive for IgA anti-tTG antibodies who were also seropositive for IgA anti-gliandin and anti-

	EMA) These patients had autoimmune hepatitis type I (n=4), Wilson's disease (n=3), coeliac hepatitis (n=3), primary sclerosing cholangitis (n=2), primary biliary cirrhosis (n=1), Budd-Chiari syndrome (n=1), toxic hepatitis (n=1), non-alcoholic steatohepatitis (n=1)
Source of funding	Czech Ministry of Health, the Academy of Sciences of the Czech Republic, the Czech Science Foundation, Institutional Research Concept Grant
Conflicts of interest	Not reported
Comments	

Definitions of abbreviations are given at the end of this document.

Bibliographic reference	**Eapen et al. (2011)**
Study type	Cross-sectional data from retrospective case control
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html) 1. Was the sample representative of the target population? YES 2. Were study participants recruited in an appropriate way? NO – Unclear is consecutive sample recruited 3. Was the sample size adequate? YES 4. Were the study subjects and the setting described in detail? YES 5. Was the data analysis conducted with sufficient coverage of the identified sample? YES 6. Were objective, standard criteria used for the measurement of the condition? YES 7. Was the condition measured reliably? YES 8. Was there appropriate statistical analysis? YES 9. Are all important confounding factors/subgroups/differences identified and accounted for? YES 10. Were subpopulations identified using objective criteria? NA Overall risk of bias = MODERATE
Country	UK
Number of patients	N=30 adults with non-cirrhotic intrahepatic portal hypertension
Study population	Inclusion: patients with non-cirrhotic intrahepatic portal hypertension who were managed in the Liver Unit at Queen Elizabeth Hospital in Birmingham between January 1999 and August 2005; All 5 of the following must be met: portal hypertension (evidenced by any 2 of the following: varicies, hypersplenism, ascites, hepatic venous pressure gradient > 5 mmHg), patent hepatic and portal veins on Doppler ultrasound at diagnosis, no cirrhosis or bridging fibrosis on liver biopsy, exclusion of conditions causing cirrhosis by conventional diagnostic criteria (ie. chronic viral hepatitis, alcoholic hepatitis, etc).

	Exclusion: histological features of another disease process, liver transplantation preceding condition, hepatic malignancy
	Median age at presentation with non-cirrhotic intrahepatic portal hypertension: 38.5 (IQR 17-74)
Control	There were control groups but these were not relevant for considering coexisting conditions of coeliac disease
Details of coeliac testing	IgA tTG, EMA
Results	16% (5/31) had biopsy-proven CD
Source of funding	One author was supported by a Fellowship award by the European Association for the Study of the Liver for 2004; no further details on funding for the study
Conflicts of interest	Not reported
Comments	

Definitions of abbreviations are given at the end of this document.

Bibliographic reference	**Gatselis et al. (2012)**
Study type	Cross-sectional survey
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html)
	1.　　Was the sample representative of the target population? YES
	2.　　Were study participants recruited in an appropriate way? YES (consecutive sample recruited)
	3.　　Was the sample size adequate? YES
	4.　　Were the study subjects and the setting described in detail? YES
	5.　　Was the data analysis conducted with sufficient coverage of the identified sample? YES
	6.　　Were objective, standard criteria used for the measurement of the condition? YES
	7.　　Was the condition measured reliably? YES
	8.　　Was there appropriate statistical analysis? YES
	9.　　Are all important confounding factors/subgroups/differences identified and accounted for? YES
	10.　　Were subpopulations identified using objective criteria? NA
	Overall risk of bias = LOW
Country	Greece
Number of patients	N=668 adults with chronic liver diseases
Study population	Inclusion: patients with chronic liver diseases without GI symptoms who attended and were followed up at the Department of Medicine,

	Larissa Medical School, University of Thessaly, Larissa over a 10 year period <u>Liver diseases:</u> - 426 viral hepatitis (275 chronic hepatitis B, 144 chronic hepatitis C, 3 both chronic hepatitis B&C) - 94 autoimmune liver disease (21 autoimmune hepatitis, 45 primary biliary cirrhosis, 24 primary sclerosing cholangitis, 4 with both autoimmune hepatitis and either primary biliary cirrhosis [3] or primary sclerosing cholangitis [1]) - 61 alcoholic disease - 46 non-alcoholic fatty livery disease - 41 other liver disorders (27 undefined hepatic disorders, 3 with benign liver tumours, 1 with Wilson's disease, 1 with transminasemia due to hyperthyroidism, 9 with miscellaneous disorders like mitochondiral disease, benign cholestasis of pregnancy, dysfunction of sphincter of Oddi, a1-antithrypsin deficiency, drug induced hepatitis and secondary hemochromatosis) Median age 53 years (range 26-85) 378 males, 290 females
Control	none
Details of coeliac testing	Anti-DGP IgA, anti-DGP IgG, DGP-IgG and anti-tTG IgA (ELISAs, INOVA diagnostics) Biopsy if positive on serology
Results	29 of 91 who were positive for at least one autoantibody had a biopsy 0.89% (6) had villous flattening on duodenal biopsy and modified Marsh 3a (3 had chronic hepatitis B, 1 had chronic hepatitis B, 1 had alcoholic liver disease, and 1 had undefined liver disease) (Of the others with positive serology and tested with biopsy, 1 had Marsh 1 and the rest had Marsh 0)
Source of funding	Not reported
Conflicts of interest	One author is an employee of INOVA Diagnostics who also supplied some of the ELISA assays (but they did not have an influence on the study design, conduct, or reporting. No other authors received any financial support from any other party.
Comments	

Definitions of abbreviations are given at the end of this document.

Bibliographic reference	**Germenis et al. (2005)**
Study type	Case-control
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html) 1. Was the sample representative of the target population? YES 2. Were study participants recruited in an appropriate way? YES (consecutive sample recruited)

	3. Was the sample size adequate? YES 4. Were the study subjects and the setting described in detail? YES 5. Was the data analysis conducted with sufficient coverage of the identified sample? YES 6. Were objective, standard criteria used for the measurement of the condition? YES 7. Was the condition measured reliably? YES 8. Was there appropriate statistical analysis? YES 9. Are all important confounding factors/subgroups/differences identified and accounted for? YES 10. Were subpopulations identified using objective criteria? NA Overall risk of bias = LOW
Country	Greece
Number of patients	N=738 N=1350 controls
Study population	Inclusion: consecutive patients with chronic liver disease at an academic liver unit, over the last 5yrs, N=406 males, median age 53yrs (range 6 to 85yrs) (N=462 with viral hepatitis; N=117 with autoimmune hepatitis; N=113 with alcoholic liver disease/non-alcoholic fatty liver disease Total IgA levels in all subjects were within normal limits
Control	
Results	N=4/738 with diverse chronic liver disease IgA EMA +ve; prevalence 1:185 (0.54%) N=3/4 biopsied, N=2 coeliac disease N=4/1350 controls IgA EMA +ve, all biopsied and had histologic changes compatible with coeliac disease; prevalence 1:338 (0.3%)
Source of funding	Not reported
Conflicts of interest	
Comments	

Definitions of abbreviations are given at the end of this document.

Bibliographic reference	**Olsson et al. (1982)**
Study type	Case series
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html) 1. Was the sample representative of the target population? YES 2. Were study participants recruited in an appropriate way? YES (consecutive sample recruited)

	3. Was the sample size adequate? YES 4. Were the study subjects and the setting described in detail? YES 5. Was the data analysis conducted with sufficient coverage of the identified sample? YES 6. Were objective, standard criteria used for the measurement of the condition? YES 7. Was the condition measured reliably? YES 8. Was there appropriate statistical analysis? YES 9. Are all important confounding factors/subgroups/differences identified and accounted for? YES 10. Were subpopulations identified using objective criteria? NA Overall risk of bias = LOW
Country	Sweden
Number of patients	N=26 patients with primary biliary cirrhosis
Study population	Inclusion: consecutive patients with primary biliary cirrhosis
Control	none
Details of coeliac testing	Biopsy with suction capsule or endoscopic duodenal biopsy Immunoglobin – IgA and IgG
Results	19.2% (5/26) had intestinal villous atrophy (4 had subtotal and 1 had partial) IgA was elevated in 2 and IgG in 3 1 had osteomalacia 1 had diarrhoea of short duration and 1 had no diarrhoea
Source of funding	Not reported
Conflicts of interest	Not reported
Comments	Selection of patients not described

Definitions of abbreviations are given at the end of this document.

Bibliographic reference	**Thevenot T et al. (2007)**
Study type	Cross-sectional survey
Study quality	The Joanna Briggs Institute Prevalence Critical Appraisal Tool (http://ijhpm.com/article_2870_607.html) 1. Was the sample representative of the target population? YES

	2. Were study participants recruited in an appropriate way? YES (consecutive sample recruited) 3. Was the sample size adequate? YES 4. Were the study subjects and the setting described in detail? YES 5. Was the data analysis conducted with sufficient coverage of the identified sample? YES 6. Were objective, standard criteria used for the measurement of the condition? YES 7. Was the condition measured reliably? YES 8. Was there appropriate statistical analysis? YES 9. Are all important confounding factors/subgroups/differences identified and accounted for? YES 10. Were subpopulations identified using objective criteria? NA Overall risk of bias = LOW
Country	France
Number of patients	N=624 adults
Study population	Inclusion: consecutive patients with hepatitis C virus attending 8 outpatients departments between June 2003 and November 2005, N=373 male, mean age 52±14yrs Exclusion: <18yrs, viral hepatitis B infection, +ve HCV antibodies with –ve HCV-RNA
Results	N=1 AEA +ve, biopsy did not show CD, N=34 biopsied in total, none showed CD, prevalence 0%
Source of funding	none
Conflicts of interest	
Comments	

Definitions of abbreviations are given at the end of this document.