proinflammatory genes. The similarity of the authors' findings in disparate models suggests that guggulsterone might have similar effects in all intestinal epithelial cells.

The authors also studied a mouse model of colitis induced with dextran sodium sulphate. Compared with control mice that did not receive guggulsterone, guggulsterone-treated mice had markedly reduced severity of colitis (in terms of clinical disease activity, colon length, and histology). Western blots and immunohistochemical analysis of colon tissue showed that guggulsterone-treated mice had reduced upregulation of the inhibitor of NFκB and reduced phosphorylation of the inhibitor of NFκB kinase complex, compared with control mice.

IBD is known to be associated with NFκB signaling pathway activation: the authors conclude, therefore, that guggulsterone could be an attractive option for IBD therapy.

**Original article** Cheon JH *et al.* (2006) Plant sterol guggulsterone inhibits nuclear factor-κB signaling in intestinal epithelial cells by blocking IκB kinase and ameliorates acute murine colitis. *Inflamm Bowel Dis* **12:** 1152–1161

## Low-dose aspirin plus coxibs or NSAIDs elevate the risk of UGIB

Long-term NSAID use causes upper gastrointestinal bleeding (UGIB), but selective cyclooxygenase 2 inhibitors (coxibs) are thought to reduce this risk. Lanas and colleagues, however, found that low-dose aspirin combined with either coxibs or NSAIDs synergistically exacerbated patients' risk of UGIB; they recommend caution with coadministration of coxibs and NSAIDs—particularly in patients with high cardiovascular risk—until further data are obtained.

Their hospital-based, case–control study compared the risk of UGIB associated with non-aspirin NSAIDs, coxibs, aspirin, and combinations thereof, in 2,777 consecutive patients (mean age 61 years) with endoscopy-proven UGIB from peptic ulcers, and 5,335 controls matched for age, hospital and month of admission.

The NSAIDs with the lowest relative risk of UGIB were diclofenac, aceclofenac and ibuprofen, whereas piroxicam and ketorolac had the highest relative risks (1.4–2.5 versus 7.2–8.0 times that of controls). Worldwide, the authors noted that meloxicam—a moderate-risk NSAID—was prescribed more frequently after rofecoxib was withdrawn by the FDA, whereas the low-risk NSAIDs diclofenac and aceclofenac were sparsely used, and unavailable in the USA.

Rofecoxib, but not celecoxib, modestly increased patients' UGIB risk. Overall, coxibs increased UGIB risk to a lesser extent than either NSAIDs or cardioprotective aspirin (100–300 mg daily). Cardioprotective aspirin use accounted for 15% of UGIB cases, and analgesic aspirin (≥500 mg daily) was associated with a large excess risk of UGIB; the authors suggest that free availability and clinical use of analgesic aspirin should be restricted.

**Original article** Lanas A *et al.* (2006) Risk of upper gastrointestinal ulcer bleeding associated with selective cyclooxygenase-2 inhibitors, traditional non-aspirin non-steroidal anti-inflammatory drugs, aspirin and combinations. *Gut* **55:** 1731–1738

## Passive plus active HBV immunization gives better protection than vaccine alone

Vertical transmission of hepatitis B virus (HBV) from mother to child is a major route of spread, but debate continues over whether perinatal vaccine administration alone adequately prevents transmission. Kabir and colleagues, therefore, investigated the efficacy of perinatal administration of combined active and passive HBV immunoprophylaxis in Iran, where the prevalence of HBV is <3% (intermediate).

The study cohort included 823 children born to 264 mothers who were seropositive for HBV surface antigen (HBsAg). In total, 638 children (157 were aged ≤16 years and 481 were aged >16 years; children aged ≤16 years were presumed to have had no sexual contact) received neither hepatitis B recombinant vaccine (HBrv) nor hepatitis B immunoglobulin (HBIg), 125 babies received only HBrv, and 60 babies received HBrv and HBIg at birth.

In nonimmunized children, the prevalence of HBsAg seropositivity was higher in those aged >16 years than in those aged ≤16 years (56.1% versus 40.3%), which suggested that horizontal transmission occurred among young adults. HBrv-immunized infants had a higher prevalence of HBsAg seropositivity