SHORT CUTS

ALL YOU NEED TO READ IN THE OTHER GENERAL JOURNALS

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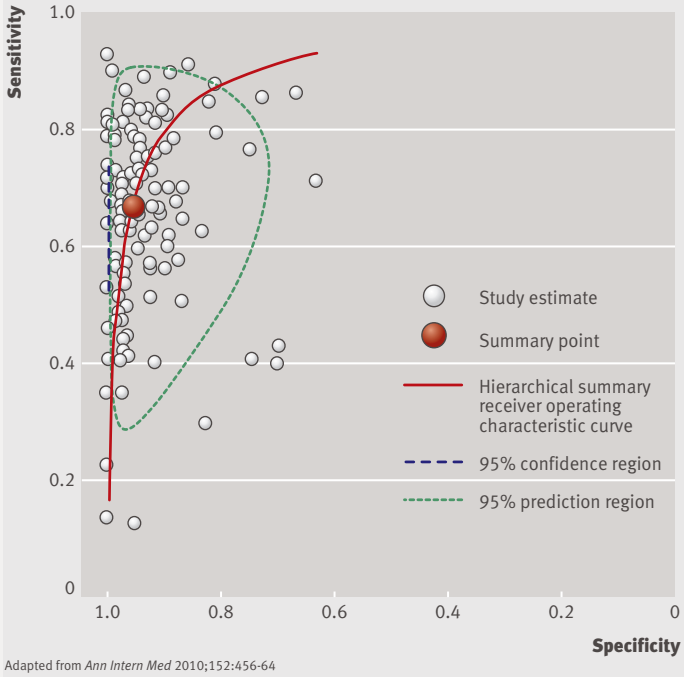
"Can surgery go backwards? The answer from history is yes, very easily: combine an exciting new technique with a popular new diagnosis in an open market, and anything can happen"
Richard Lehman's journal blog, doc2doc.bmj.com

SENSITIVITY AND SPECIFICITY OF ALL ANTIBODY ASSAYS



Adapted from *Ann Intern Med* 2010;152:456-64

Newer anticitrullinated peptide antibody assays seem best for early detection of rheumatoid arthritis

Early treatment of rheumatoid arthritis has been shown to reduce sequelae such as joint damage and disability, as well as to prolong life, but early diagnosis remains a challenge. In addition to testing for rheumatoid factor, many doctors are adopting the use of assays for detecting anticitrullinated peptide antibodies, which are thought to be as sensitive but more specific than tests for rheumatoid factor. A systematic review of 151 observational studies confirms this.

The sensitivity of these assays in individual studies ranged from 12% to 93%, whereas specificity ranged from 63% to 100%. The pooled analysis set sensitivity at 67% and specificity at 96%. The figure shows the 95% prediction region, where the results of 95% of future studies are expected to lie.

Second generation anticitrullinated peptide antibody assays have better diagnostic accuracy than all other tests. In 15 cohort studies of early rheumatoid arthritis, second generation tests helped diagnose early rheumatoid arthritis, which can lead to early treatment, although a negative test result does not rule out the disease (positive and negative likelihood ratio of 12.7 and 0.45, respectively).

Evidence is lacking on whether testing for rheumatoid factor adds to the diagnostic accuracy of second generation anticitrullinated peptide antibody assays alone.

Ann Intern Med 2010;152:456-64

No support for vitamin C and E supplements in pregnancy

Daily supplementation with 1000 mg of vitamin C and 400 IU of vitamin E from early on in pregnancy does not improve mothers' or babies' outcomes related to hypertension. The placebo controlled trial randomised 10 154 women in the ninth to 16th week of their first pregnancy, who at baseline were at low risk of pre-eclampsia.

No difference was seen between the groups in the primary outcome—a composite of severe pregnancy associated hypertension alone or severe or mild hypertension with raised liver enzymes—which occurred in 6.1% (305/4993) of women randomised to vitamins and in 5.7% (285/4976) of women randomised to placebo (relative risk 1.07, 95% confidence interval 0.91 to 1.25). Rates of pre-eclampsia were also similar between the groups (7.2% (358/4993) and 6.7% (332/4976), respectively). In addition, other secondary outcomes—including thrombocytopenia, raised serum creatinine, eclamptic seizure, medically indicated preterm birth, fetal growth restriction, and perinatal death—did not differ between the groups.

Oxidative stress is thought to be one possible mechanism by which abnormal placentation or perfusion leads to mothers' symptoms in pre-eclampsia. However, only one trial (the first, published in 1999) found antioxidants to be effective in preventing pre-eclampsia. All later trials have failed to replicate these positive findings. So far, vitamins C and E have been found to be ineffective in preventing pre-eclampsia in women at high risk, in women who are likely to have deficiency of these vitamins, and now in primiparous women at low risk.

N Engl J Med 2010;362:1282-91

Juvenile idiopathic arthritis: prevention of relapse can now be individualised

Remission is achievable for children with juvenile idiopathic arthritis, but it is unclear how long treatment should continue for best control of future flares. To answer this question, a randomised trial of drug withdrawal was performed in 61 centres across 29 countries. The 364 participants were randomised to stop taking methotrexate and non-steroidal anti-inflammatory drugs six months or 12 months after the active symptoms resided. Follow-up lasted for at least one year after discontinuation of treatment.

Longer treatment failed to reduce the risk of relapse. Of the 183 children who stopped taking methotrexate after six months, 98 relapsed within 24 months of baseline (relapse rate 56.7%), compared with 94 (55.6%) of the 181 who continued taking the drug to 12 months after remission onset (odds ratio 1.02, 95% confidence interval 0.82 to 1.27). Children were free of new flares for a median of 21 months in the six month group, compared with 23 months in the 12 month group.

The study also examined myeloid related proteins 8 and 14 heterocomplex, or calprotectin, as a potential marker of subclinical disease during remission. Higher serum concentrations of this complex, which is secreted by activated phagocytes, were found in children who later developed flares. Unlike the erythrocyte sedimentation rate and concentrations of C reactive protein, calprotectin may be a predictor of relapse: children with serum concentrations lower than 690 ng/ml are unlikely to relapse within three months (negative predictive value 98%).

JAMA 2010;303:1266-73

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