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Internal medicine update, part II

PREMATURE VENTRICULAR CONTRACTIONS: RISK OF SUDDEN DEATH

When are premature ventricular contractions (PVCs) benign? When do they require treatment? First, in evaluating patients with PVCs, look for ventricular impairment. If left and right ventricular function is normal, the risk of sudden death is very small, and treatment is rarely indicated. However, as the ejection fraction falls below 40%, the risk of sudden death rises, and when it falls to 30% or less, the risk is very high. At this point, antiarrhythmic therapy is indicated, with a caveat: proarrhythmic effects (especially from class 1A antiarrhythmic agents) are likely in patients with an ejection fraction of 30% or less, so patients should be monitored closely.

PVCs are characterized electrocardiographically by a wide QRS complex, no preceding P wave, a retrograde P wave (sometimes), and a compensatory pause.

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EARLY DRAINAGE OF PARAPNEUMONIC EFFUSIONS

Exudative effusions often accompany bacterial pneumonia but usually resolve spontaneously with appropriate antimicrobial therapy of the pneumonia. A few effusions progress to empyema (frank pus in the pleural space) and subsequent loculation and fibrosis of the pleura. Treatment at this late stage may require several tube thoracostomies or even surgical decortication. These complications, however, can be prevented

Highlights from The Cleveland Clinic Foundation's continuing medical education course, "Intensive Review of Internal Medicine." Drs. Longworth and Stoller were course co-directors.

by early and complete drainage of the pleural space with a single chest tube. The goal is to intervene selectively, but early enough to be effective.

All parapneumonic effusions should be evaluated immediately by thoracentesis, a relatively low-risk procedure. Complete drainage is usually indicated if there is frank pus, bacteria on Gram's stain, a positive culture, or radiographic evidence of loculation. Sterile effusions without a turbid appearance do not warrant aggressive treatment.

In patients with parapneumonic effusions, the pH value may provide ancillary information in deciding whether chest tube drainage is warranted. As a general rule, low-pH effusions (range, less than 7.0 and up to 7.2) occur in patients at high risk for loculation. High-pH effusions (pH >7.3) present a very low risk. It should be noted that the literature does not support the use of a single cutoff pH value as a predictor. In addition, misinterpretation of the pH is possible if fluid specimens are not kept anaerobic and on ice prior to analysis.

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SUCCESSFUL PREGNANCY IN DIABETIC MOTHERS

Successful completion of pregnancy in a diabetic woman is the expected result; however, this will only occur if the patient commits herself to frequent perinatal examinations, adherence to a strict diet, aggressive home blood glucose monitoring, and frequent fetal surveillance.

Infants of diabetic mothers are at increased risk for macrosomia, neonatal metabolic complications, and congenital abnormalities, and for developing diabetes, as well. For the mother, pregnancy may worsen diabetic nephropathy, retinopathy, and gastroparesis.