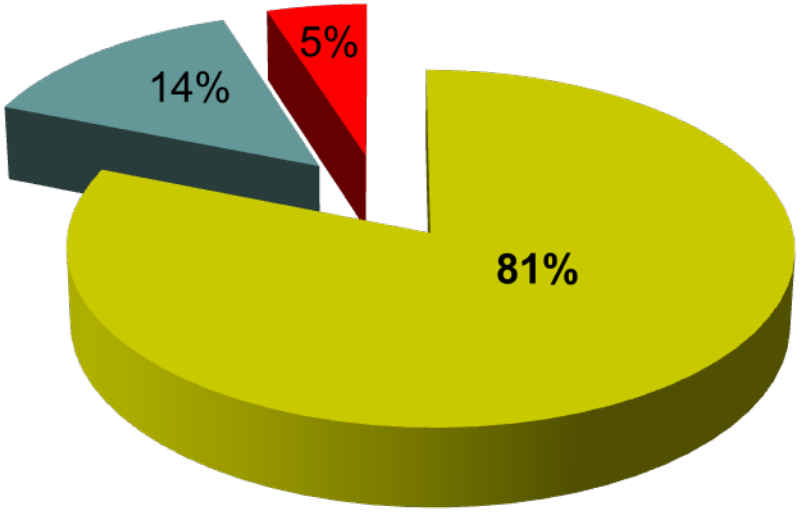
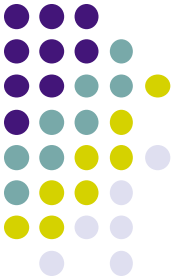
Etiologies of regular WCT



VT was misdiagnosed in 68% !

Akhtar M et al 1988 Ann Intern Med

Currently used criteria in regular WCT



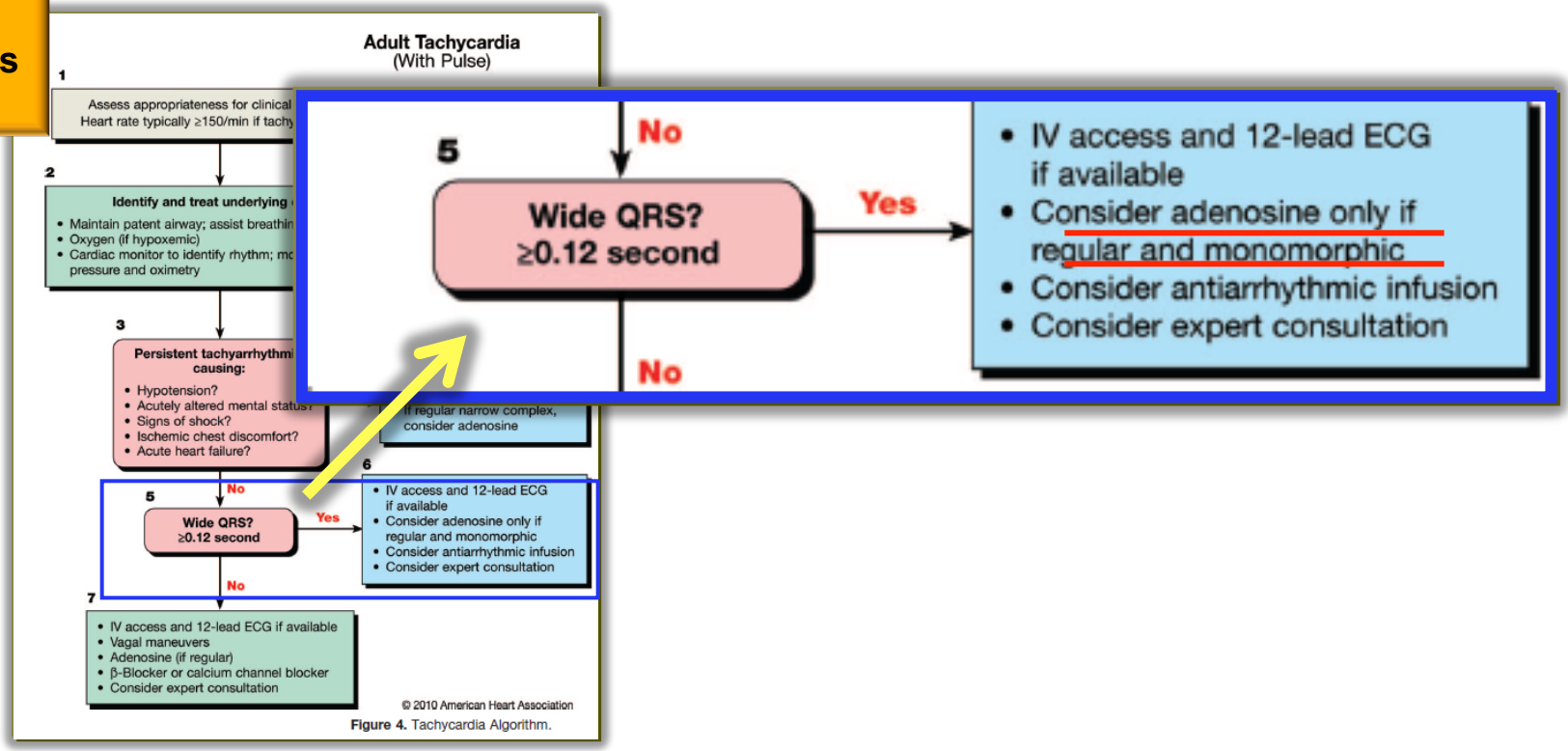
- History
- Clinical presentation
- Pharmacological test
  - e.g. Adenosine / ATP / Verapamil
- ECG features

Regular WCT – VT or SVT ?
~ Role of Pharmacological Test ~

Adenosine (or ATP – derivative of adenosine)

- Transiently depresses AV node activity
- Effectively terminates >90% of SVT & some VT (eg. Idiopathic VT)

ACLS Guidelines 2010



Regular WCT – VT or SVT ?
~ Role of Pharmacological Test ~

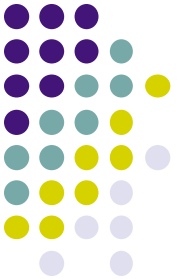
Verapamil (Isoptin)

- Blocks AV node
- Terminates > 90% of SVT & some VT (eg. Fascicular VT)
- -ve inotropic effects
- High incidence of hemodynamic collapse, **VF** & cardiac arrest when verapamil given to patients with VT

IV verapamil should **NEVER** be given to patients with **WCT** unless dx of **SVT** is certain !!!

Regular WCT – VT or SVT ?

~ ECG features of VT ~



Presence of fusion or capture beats

AV dissociation

Absence of RS complex on chest leads

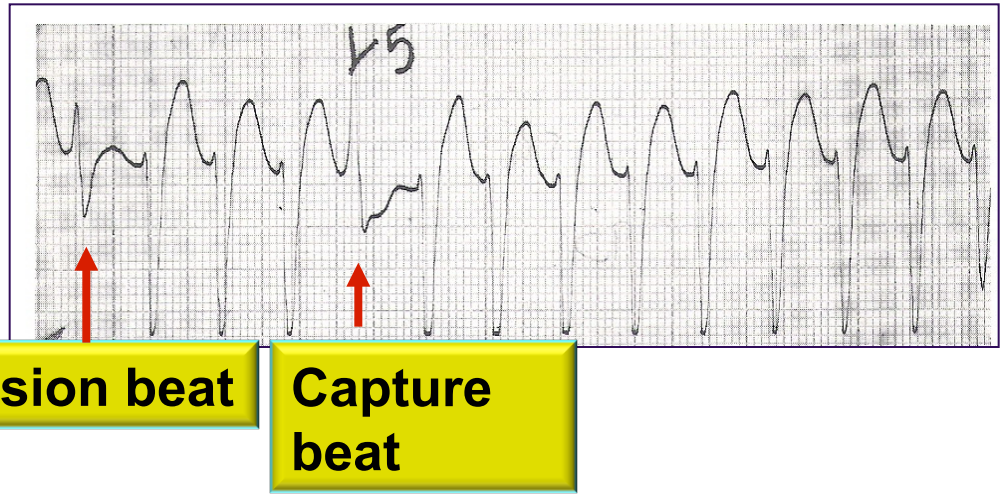
ECG features of VT

Presence of fusion & capture beats

Fusion & capture beats ?

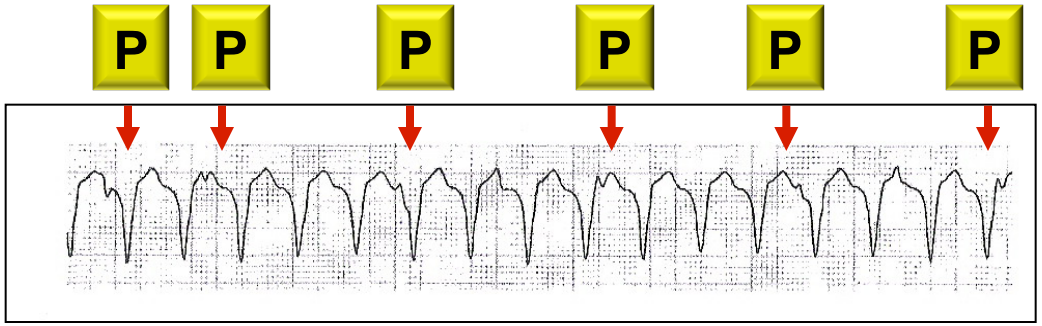
Strong indicators of **VT**

Seen in slow **VT**, helpful in 5 - 10% of patients



ECG features of VT
AV dissociation

AV dissociation (independent P waves bearing no relation to QRS complexes) ?

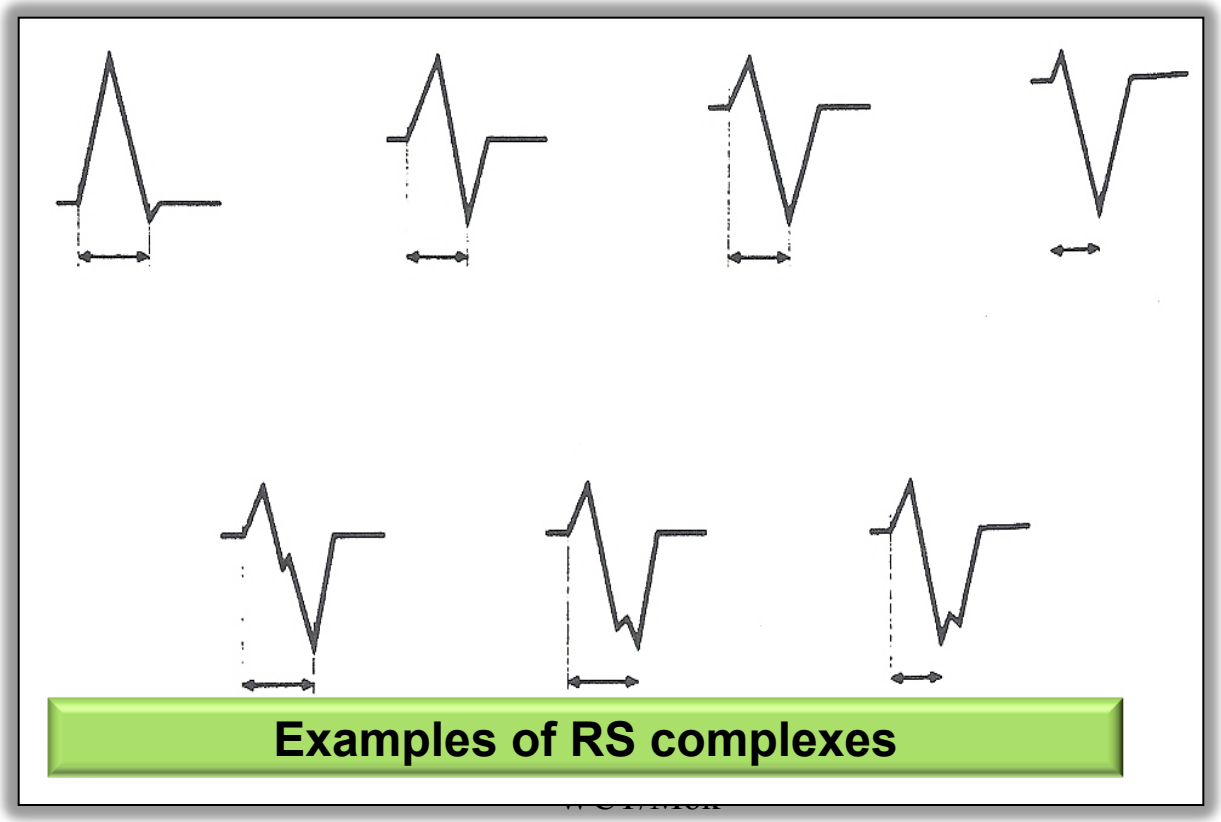


Need 12-lead ECG for interpretation

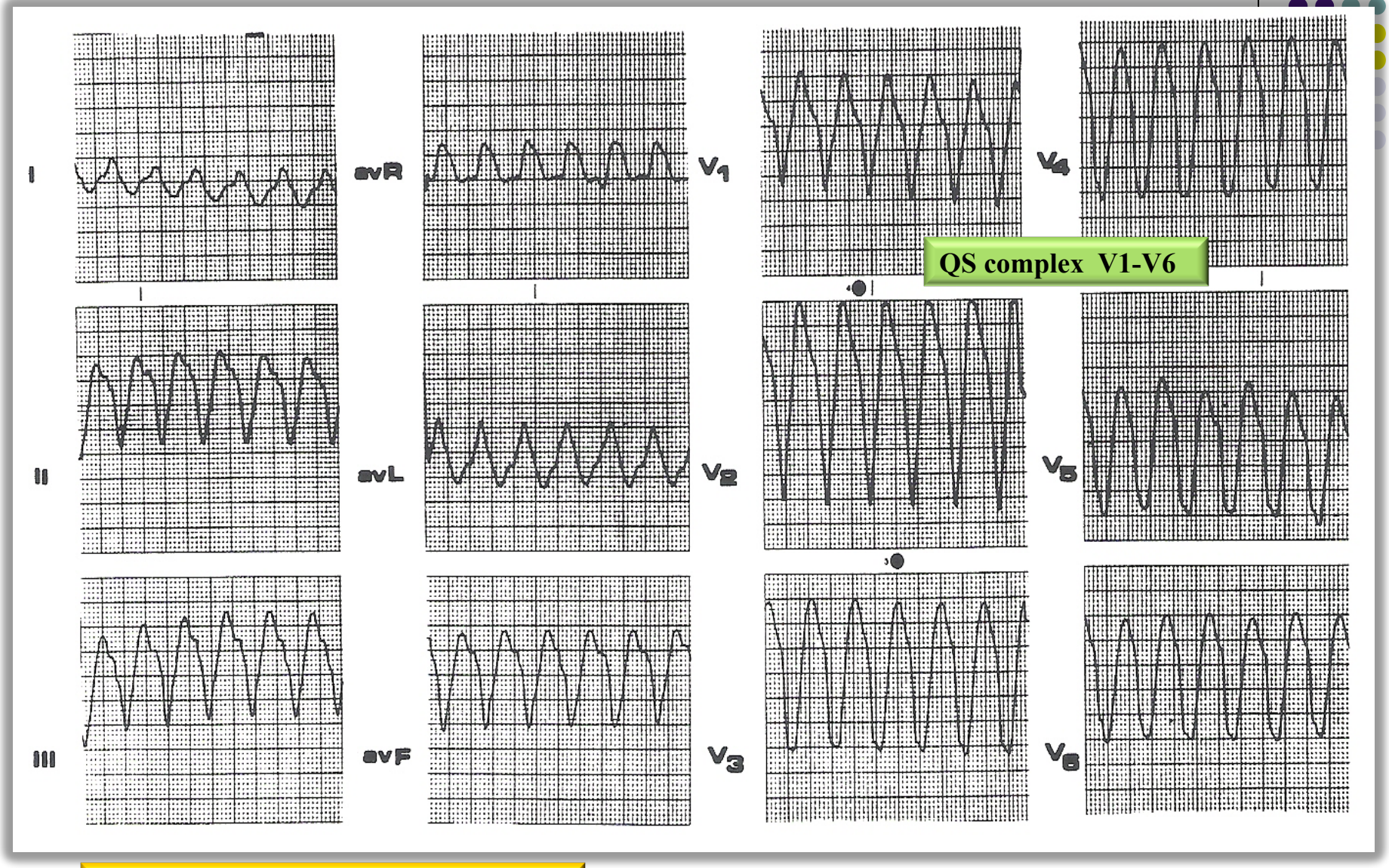
Strongly suggestive of **VT**

ECG features of VT
Absence of RS complex

Absence of an RS complex in all chest leads ?

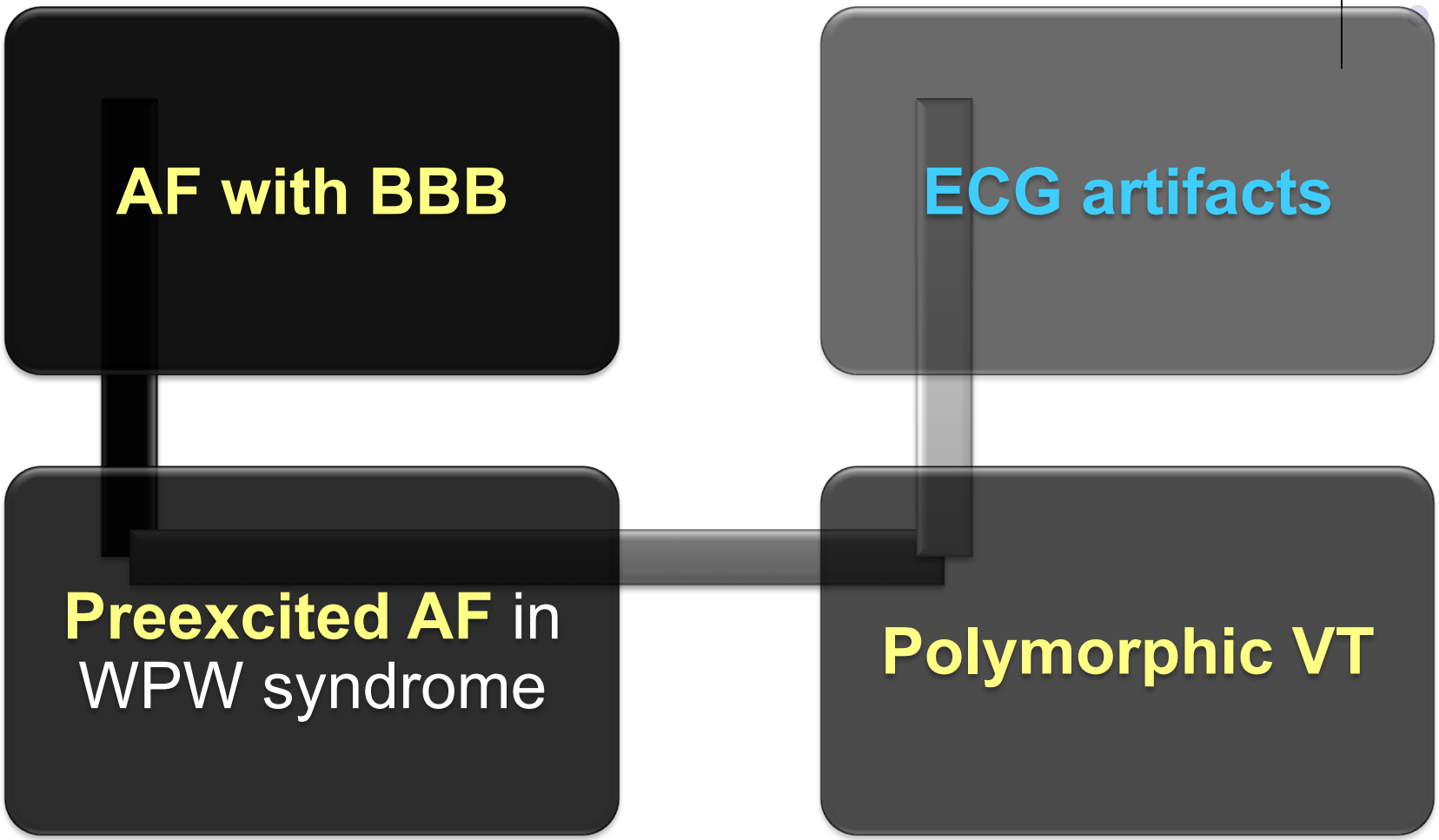


Examples of RS complexes

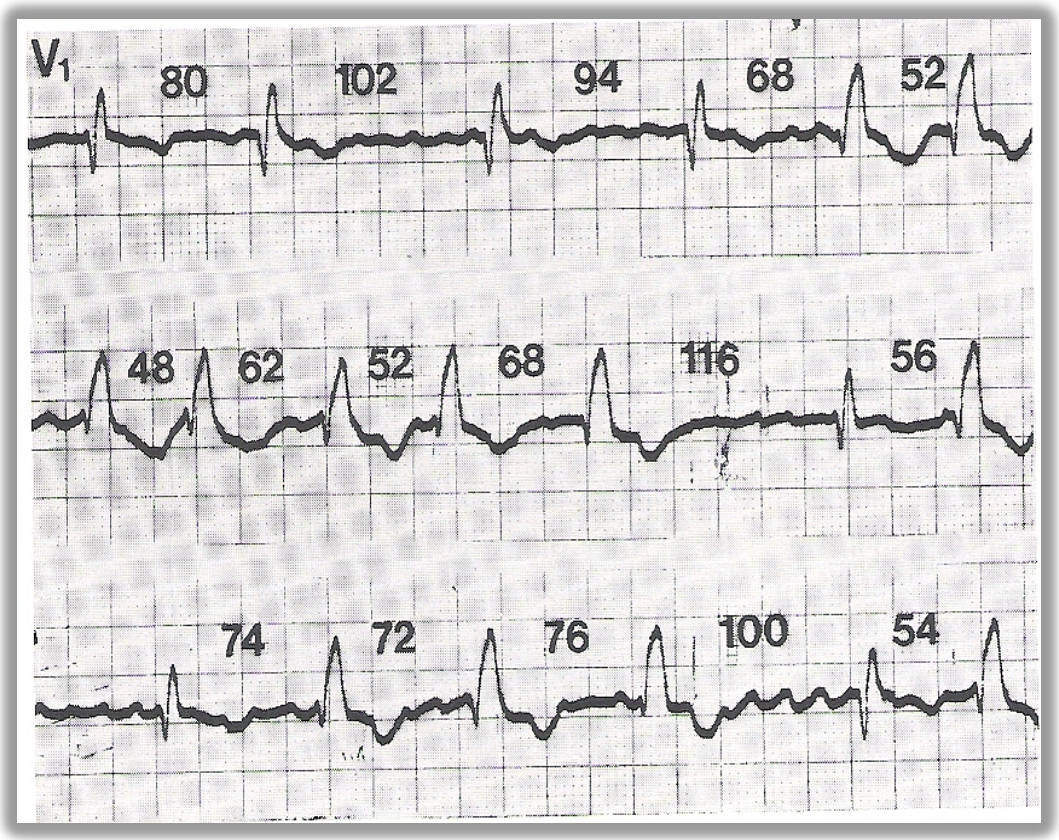


Absence of RS complex = VT

Irregular WCT - DDX



AF with BBB

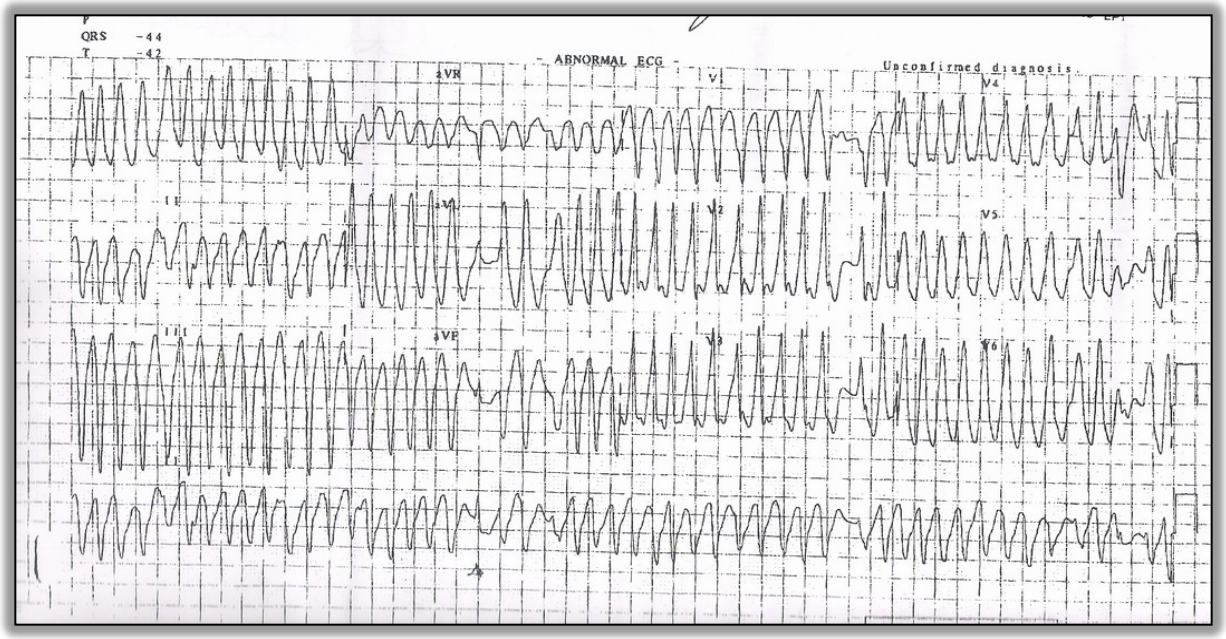


AF with rate-related RBBB

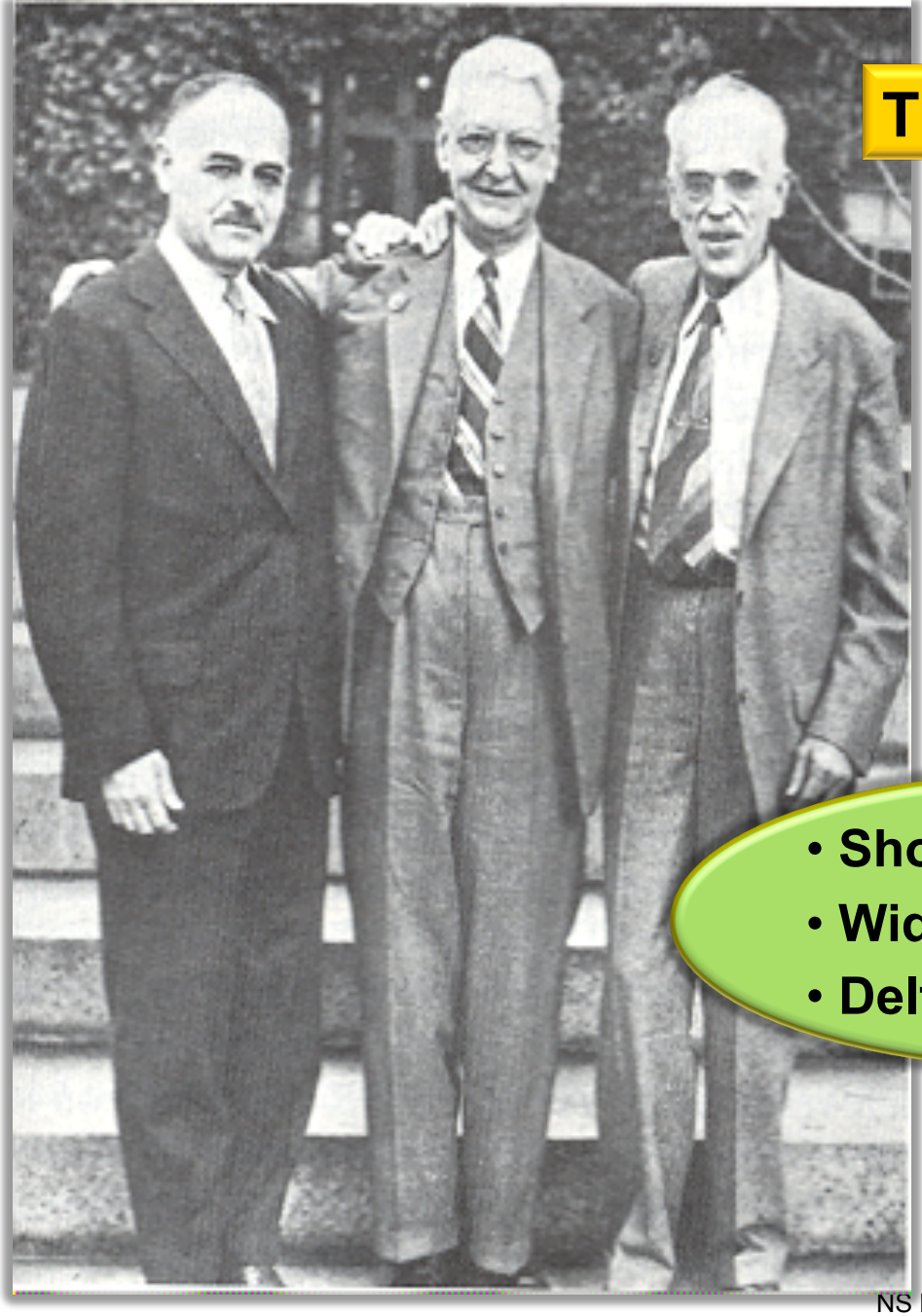
Preexcited AF in WPW syndrome

F : Fast **B**: Broad **I**: Irregular

Preexcited AF with rapid ventricular response

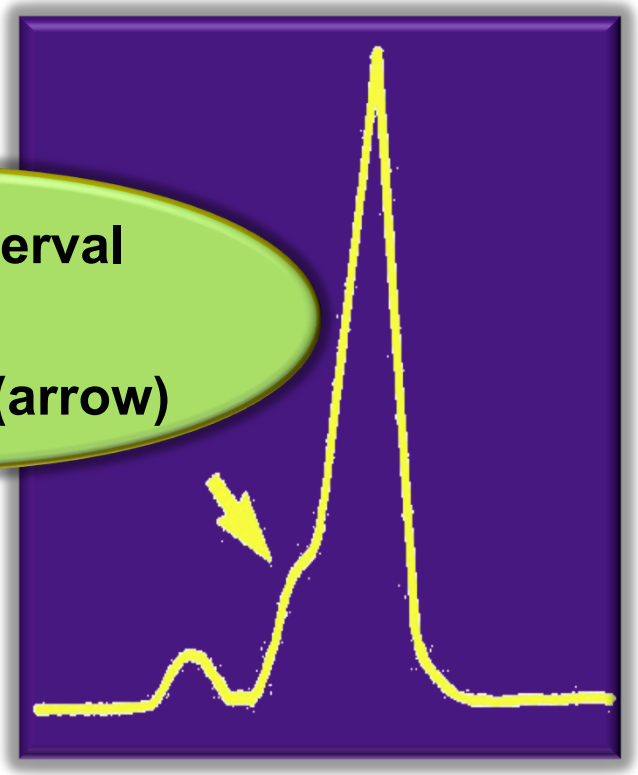


The WPW Syndrome



Louis **WOLFF**
John **PARKINSON**
Paul **WHITE**

- **Short PR Interval**
- **Wide QRS**
- **Delta Wave (arrow)**



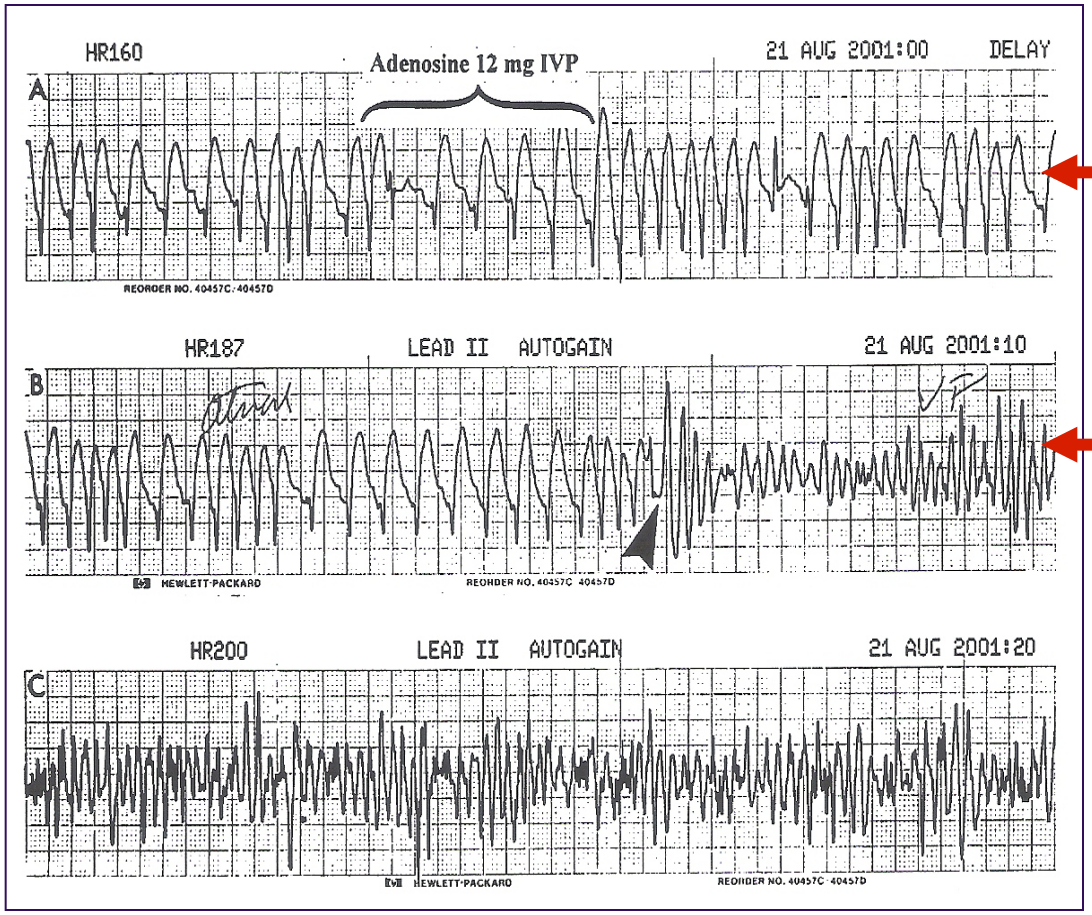
NS Mok

Adenosine Induced Ventricular Fibrillation in Wolff-Parkinson-White Syndrome

ANOOP K. GUPTA, CHETAN P. SHAH, ALOK MAHESHWARI, RANJAN K. THAKUR, OLIVER W. HAYES, and YASH Y. LOKHANDWALA

From the Thoracic and Cardiovascular Institute, Michigan State University and Sparrow Health System, Lansing, Michigan

PACE April 2002



Pre-excited AF

Adenosine-induced VF