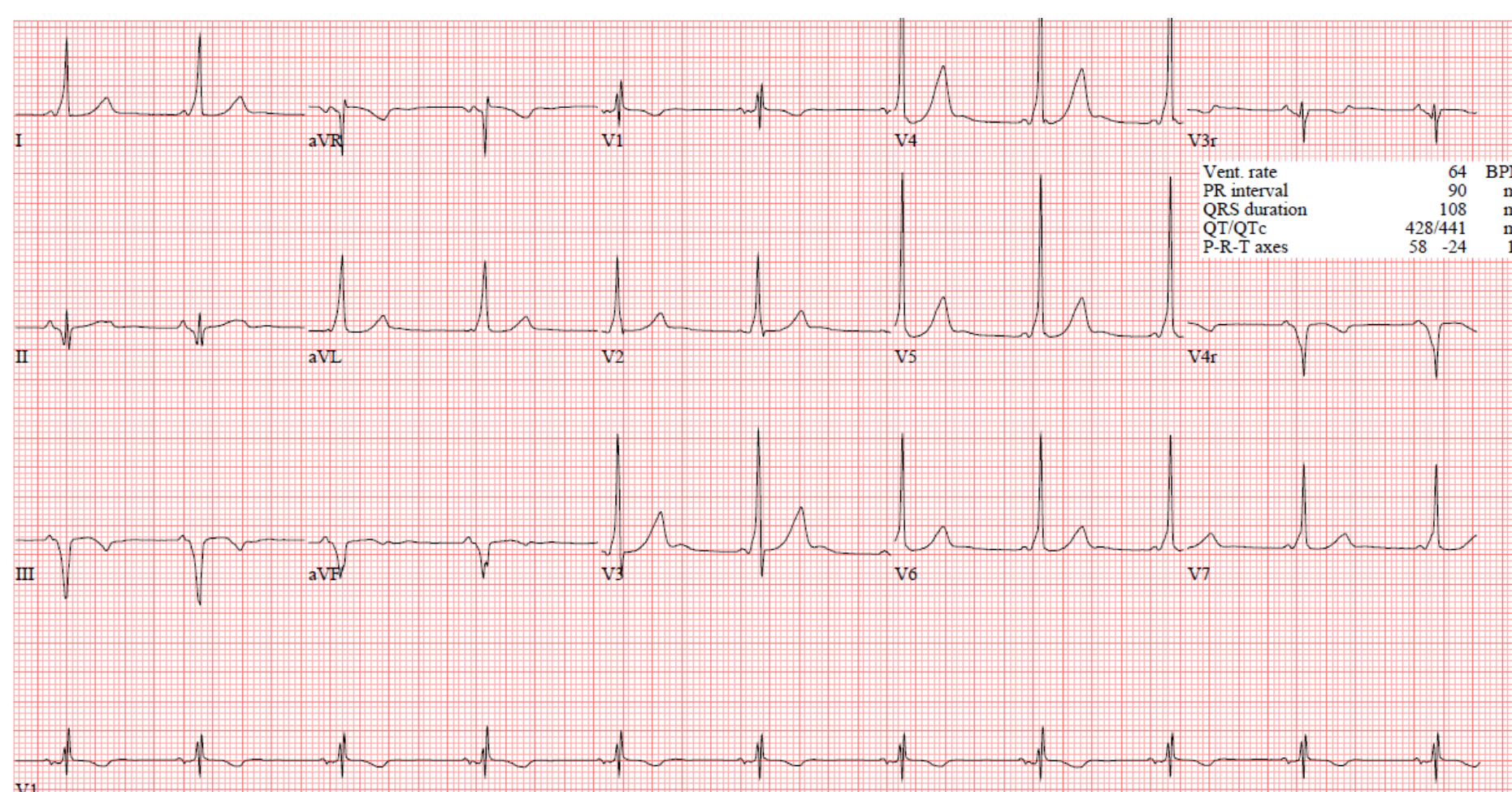


Introduction

There is a need for anesthesiologists to identify patients with potentially harmful arrhythmias in the perioperative setting. One such example is Wolff-Parkinson-White (WPW) syndrome. We present three pediatric patients, without significant cardiac history, who demonstrated incidental perioperative findings of WPW syndrome.



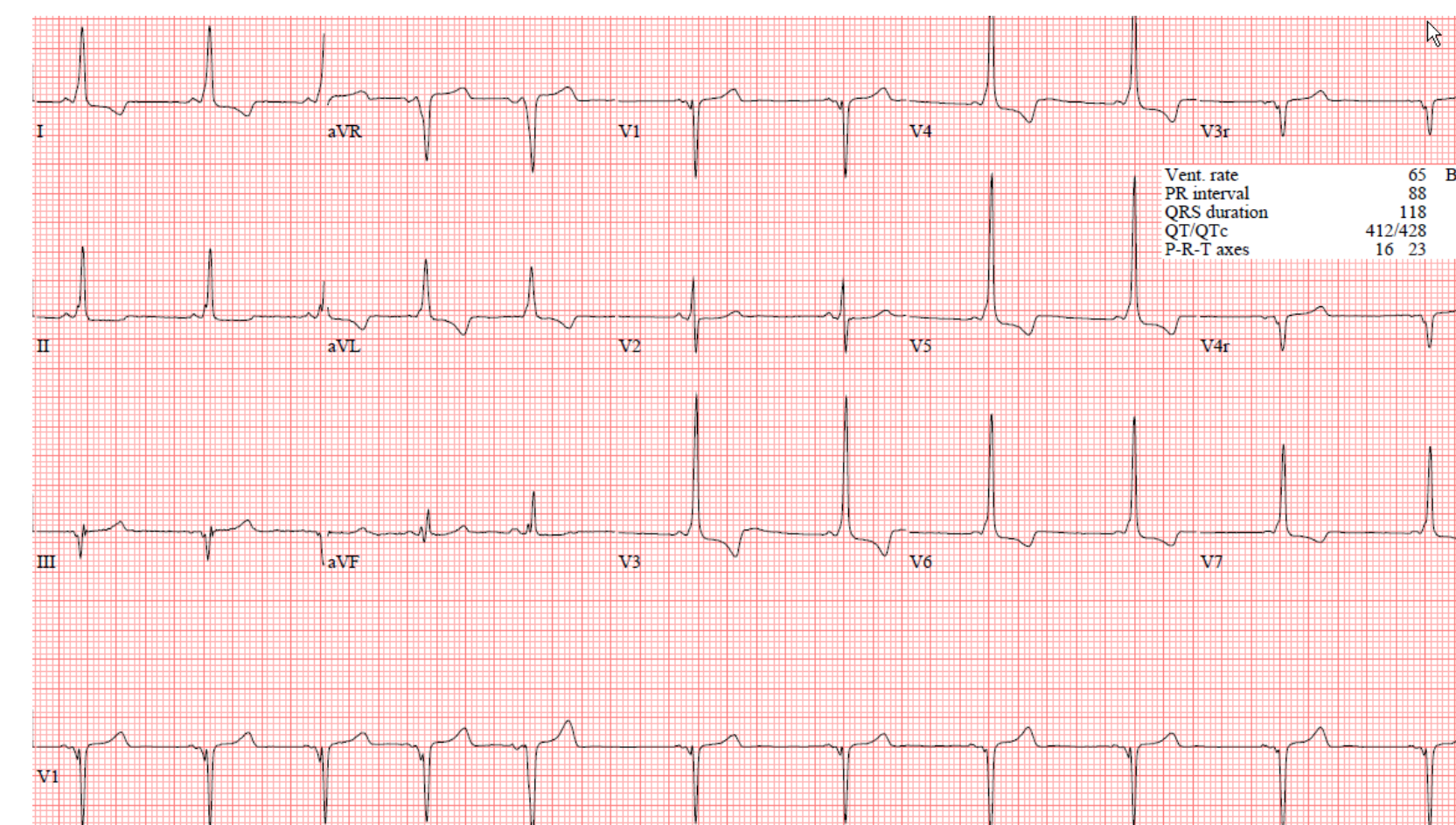
(ECG from case report #1)

Case Report #1

A 13-year-old female with a history of chronic abdominal pain, was scheduled to undergo an esophagogastroduodenoscopy (EGD). Prior to anesthesia induction, ECG telemetry was significant for an abnormal cardiac rhythm, resembling PVCs. A 12 lead ECG was obtained which suggested WPW pattern (short PR interval, delta wave/pre-excitation, and widened QRS complex). Cardiology was consulted and the case was cancelled. A trans-thoracic echocardiogram conducted in the post-anesthesia care unit (PACU) was unremarkable. The patient subsequently underwent outpatient exercise stress testing which revealed intermittent ventricular pre-excitation with a low risk accessory pathway. The EGD was later completed without complication.

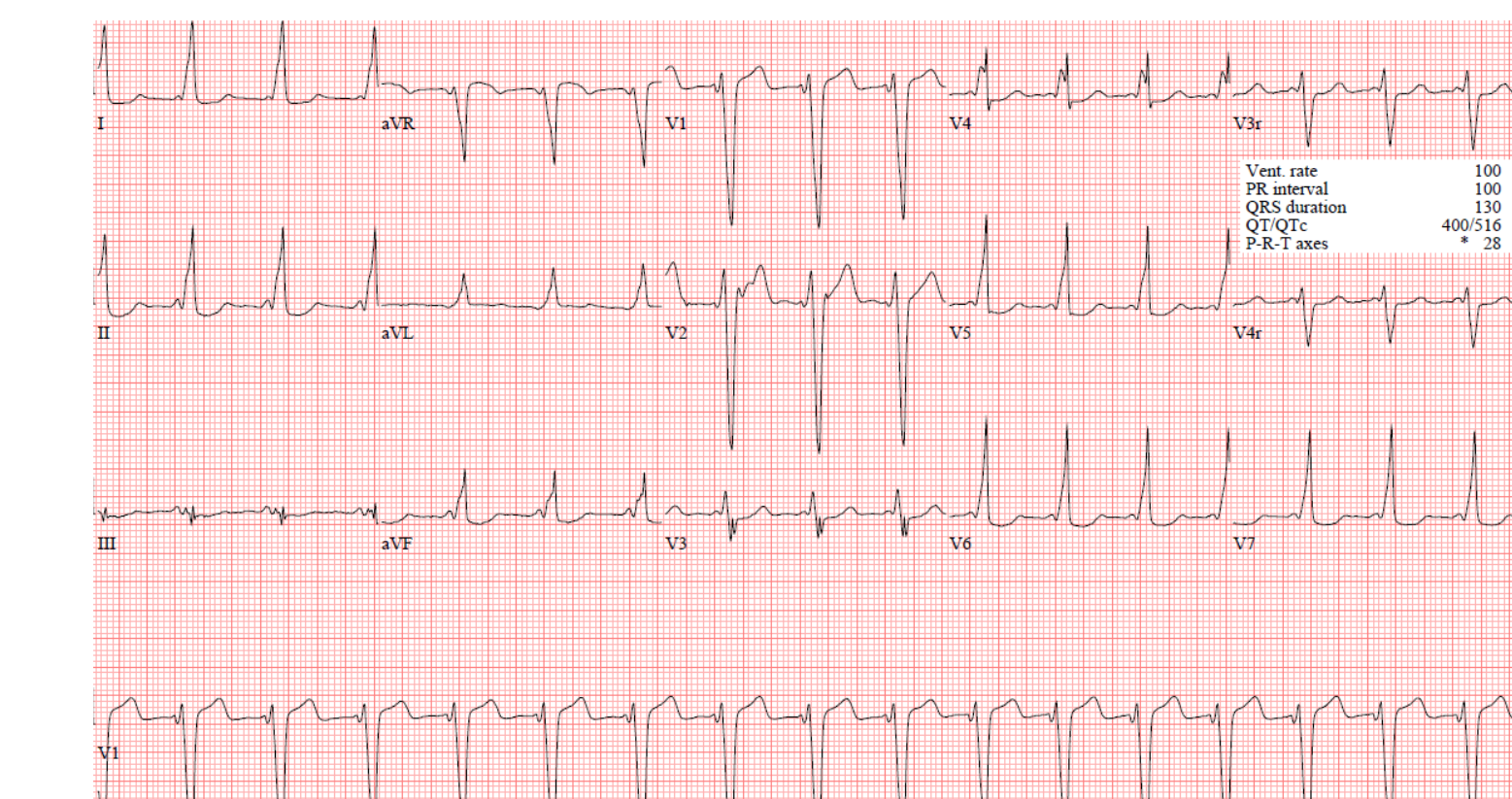
Case Report #2

A 6-year-old healthy male presented after a fall from height, and was scheduled to undergo closed reduction and percutaneous pinning of a right supracondylar fracture. Prior to anesthesia induction, delta waves were noted on intra-op ECG telemetry. Cardiology evaluated the ECG telemetry tracing remotely. The cardiologist had a low suspicion for WPW and recommended to proceed with the surgery. The procedure was uneventful but a 12 lead ECG in the PACU confirmed WPW pattern. Outpatient follow up with cardiology did not warrant any further work-up.



Case Report #3

A 17-year-old male with cholesteatoma underwent tympanoplasty and mastoidectomy under general anesthesia. The intraoperative ECG telemetry suggested ST segment depression. A postoperative 12 lead ECG in the PACU was significant for WPW pattern. This was followed by an outpatient cardiology evaluation. Focused questioning by a cardiologist revealed a history of nonspecific intermittent chest pain. The patient had a normal echocardiogram. There were frequent pre-excitation, and a high-risk pathway on his stress test. Radiofrequency ablation was recommended, but the patient declined.



Discussion

The incidence of WPW pattern is between 0.13-0.25 percent. General and regional anesthesia can unmask WPW syndrome (symptomatic tachyarrhythmia). If WPW pattern is suspected prior to anesthesia induction, cardiology consultation should be obtained before proceeding with an elective case. If WPW is suspected during a surgical procedure, it is advisable to avoid sympathetic stimulation and the use of triggering agents. An external defibrillator and anti-arrhythmic medications should be readily available. Additionally, patients should be referred to cardiology for further work up and intervention.

References

- Bengali R, Wellens HJ, Jiang Y. Perioperative management of the Wolff-Parkinson-White syndrome. J Cardiothorac Vasc Anesth. 2014;28(5):1375-86
- Sahu S, Karna ST, Karna A, Lata I, Kapoor D. Anaesthetic management of Wolff-Parkinson-White syndrome for hysterectomy. Indian Journal of Anaesthesia. 2011;55(4):378-380.