Unusual case of a traumatic VSD and ventricular aneurysm in a child secondary to a blunt chest trauma.

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Introduction: Cardiac injury from a blunt chest trauma is a very rare complication during childhood and can range from a simple contusion to myocardial rupture. Patients can present with symptoms immediately thereafter or not be diagnosed till several years later.

Case report: Secondary to a fall from a horse a 12 year old girl was injured on the left side of her chest by the animal resulting in a brief loss of consciousness. After being transported by EMS to the closest ER where she arrived in shock and was stabilized with several bolus of volume; PRBCs and FFP. An initial CT revealed a grade 4 liver laceration. On the transport to Sickkids she had short runs of ventricular tachycardia which were successful treated with Amiodarone. Due to profound hypotension she required further volume boluses and was later started on Norepinephrine. Additionally, a repeated CT showed a lung contusion and an echocardiography revealed a moderate sized muscular apical VSD and a left ventricular aneurysm. As a result of further respiratory deterioration, she was intubated. Troponin was significantly elevated (almost 3700 ng/L) and an ECG showed ST-elevation in the inferior leads. In the following days she recovered and the lung and liver injury healed. Despite her intracardiac left-to-right-shunt, due to her newly acquired VSD, she did not develop any related symptoms. The ventricular function remained good with only dyskinesia of the apex. On the day 19 after her accident she underwent a successful surgical repair and was discharged 3 days later.

Conclusion: Cardiac trauma, especially a ventricular aneurysm can be challenging to manage in the presence of liver injury with respect to anticoagulation. An early diagnosis and subsequent adequate management are important factors to minimize complications and to obtain a good outcome.