hours of presentation. Some of the other difficulties encountered were nursing training in regards to administering noradrenaline, interpreting cardiac biomarkers, follow-up arrangements, and education.

**Conclusion**

PIMS TS is still a new clinical entity and often these patients present to District general hospitals in varying circumstances of clinical instability. Some of these patients need PICU transfer which can be challenging at times. Around 25% of these patients need inotropes predominantly noradrenaline with no reported complications. There are still wide variations in the management of these patients, and further education and clear guidelines would be helpful to ensure the management of these complex children is done safely & effectively.

**Abstract 1396**

**ARRHYTHMOGENIC FLECAINIDE TOXICITY IN NEONATAL ATRIO-VENTRICULAR RE-ENTRANT TACHYCARDIA**

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Aims The incidence of AVRT in the UK is 16.3 per 100,00 live births. Anti-arrhythmic drugs are not arrhythmia suppressants. They work by changing the shape of the action potential, which alters the conductivity and refractoriness of cardiac tissue. This can cause re-entry to become both less, or more, likely to occur.

Methods Our patient (1500g) was delivered in poor condition at 29+1 by emergency C-section because of foetal bradycardia following a period of foetal tachycardia. He was intubated and then received five doses of adenosine (total 1000mcg/kg) and an amiodarone infusion because of haemodynamically-stable SVT. He was started on regular propranolol (1mg TDS).

He was extubated on day eight post-delivery. Flecainide was added on day 14 (1mg/kg BD) because of recurrent episodes of AVRT. The trigger appeared to be tachycardia, and the episodes would terminate with vagal manoeuvres (deep suctioning or ice applied to the maxilla). Electrocardiography showed AVRT with no evidence of pre-excitation and echo beats (figure 1).

The episodes of AVRT became more intractable following the initiation of flecainide. On day 18, he received three doses of adenosine (total 960mcg). On day 19, he received three doses of adenosine (total 1600mcg), and the dose of flecainide was increased (2mg/kg BD). On day 22, he received 13 doses of adenosine (total 6240mcg), and the flecainide was stopped because of arrhythmogenic toxicity. Amiodarone was orally loaded (350mg/m²) because the central line was 2F.

On day 34, the amiodarone was replaced by digoxin (5mcg/kg BD). Following this, the episodes of AVRT persisted, but the rate during episodes was well-controlled, and he was discharged home on day 46 post-delivery on dual-therapy (digoxin and propranolol).

**Results**

The Study of Anti-arrhythmic Medications in Infancy was a randomised controlled trial that found no significant difference in efficacy between propranolol (67%), and digoxin (77%), for SVT in infants. When propranolol monotherapy is ineffective management varies by institution, but there is a risk of paradoxical pro-arrhythmic effect with adjuncts, particularly with class 1c agents such as Flecainide.

**Conclusion**

The accessory pathway showed unidirectional retrograde conduction. This suggests that the accessory pathway was asymmetrical with a large source in the atrium tapering to a particularly tiny strand of activated cardiomyocytes before reaching the ventricle.

When a small source meets a large sink (a large area of non-activated cardiomyocytes), the current will flow radially from the activated site to many non-activated sites, and conduction failure will occur because the source current is distributed to many neighbouring cells, and in each of these the accumulated charge is too low to trigger an action potential. This source-sink problem was occurring for our patient in the antegrade direction, hence no pre-excitation.

Digoxin does not prevent or cardiovert arrhythmias, but it increases parasympathetic tone, so that during episodes of re-entry, the heart rate remains relatively low because of increased delay at the atrio-ventricular node. We observed these echo beats, which consisted of a ventricular beat with a retrograde p wave, followed by a QRS complex of supraventricular origin.

**Abstract 1406**

**LIFE AFTER PIMS-TS: A RETROSPECTIVE TELECONSULTATION**

Ciaran Cynic, Cheentan Singh, Neeraj Jain. North Middlesex University Hospital

Aims The COVID-19 pandemic has presented new challenges. Fortunately the paediatric age group has been less affected by COVID-19 itself but there has been an emergence of a new entity: Paediatric Multisystem Inflammatory Syndrome temporally associated with SARS-CoV-2 (PIMS-TS). Evidence for short-term outcomes of PIMS-TS has been promising, but there is a lack of follow-up studies. Information from adult studies has emerged regarding symptoms of long COVID and post-COVID postural orthostatic tachycardia syndrome.
(POTS). Here we explored the temporal progression of long-term symptoms following PIMS-TS using a parent-reported questionnaire.

**Methods** Children with a confirmed diagnosis of PIMS-TS on our unit at the time of diagnosis were identified. Case records and discharge summaries were reviewed to understand the severity of initial symptoms. A tele-questionnaire was developed focusing on questions related to POTS, general symptoms, and life activities. Parents were verbally consented and asked about symptoms 3 and 6 months after the illness. No children had pre-existing symptoms.

**Results** The study population (n=20, F:M=11:9) had a mean age of 9 years (2 – 16 years). 80% were >6 years of age. Need for intensive care was identified in 60% with 45% needing inotropic support. 80% were treated with steroids while 45% had intravenous immunoglobulin.

20% reported symptoms of POTS at 3 months after illness (figure 1). Common symptoms were brain fogging and dizziness followed by postural symptoms and blurred vision. 15% had ongoing brain fogging and dizziness at 6 months.

Myalgia (35%), headache (30%), mood changes (20%), sleep problems (20%) and peripheral vascular changes (10%) were reported at 3 months. All symptoms were improving but did not fully recover.

3 months after PIMS-TS parents reported difficulties with physical activities including walking and running (30%), sports (25%), school attendance and peer interaction (20%) and need for mental health support (10%). This also improved after 6 months.

**Conclusion** PIMS-TS is a serious condition and can make children and young people critically unwell needing intensive care. Short-term follow up and recovery of biochemical parameters has been discussed in studies from the UK and USA.1,2 Our study is the first of its kind using a tele-consultation model for data collection. This is a retrospective single-centre study from a busy university level hospital. Our study highlights that up to 35% of our patients have physical and life activity related symptoms at 3 months with improvement by 6 months after PIMS-TS.

We recommend that patients recovering from PIMS-TS should be followed up so that recovery back to baseline can be established. They may need ongoing support and rehabilitation.

**Disclosure** Authors acknowledge that is study population is small, but this also depicts the infrequent nature of PIMS-TS.

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**Quality Improvement and Patient Safety**

**62** ‘SPENDING A PENNY, BUT KEEPING IT CLEAN’ – REDUCING THE RATE OF CONTAMINATED NON-INVASIVE URINE SAMPLES IN THE PAEDIATRIC DEPARTMENT

Jennifer O’Gorman, Joe Clarke, Martin Robinson. Altnagelvin Area Hospital

Aims As the diagnosis of a urinary tract infection (UTI) has potentially significant consequences it is important to ensure that the urine sample used is as free from contaminants as possible. Contaminated samples can lead to delays to diagnosis, repeated testing and inappropriate antibiotics, as well as unnecessary follow-up. NICE recommend using a clean catch sample as their preferred method of urine collection but also allows for the use of urine pads.