A neonatal case of myocarditis associated with Campylobacter jejuni enteritis.

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Introduction:
In Western countries, bacterial causes of myocarditis are uncommon. Case reports in adult population are rare. To the best of our knowledge no neonatal cases or treatment guidelines are available. We present our experience in a neonate who developed a myocarditis, associated with a Campylobacter jejuni enteritis and bacteraemia.

Case:
Six days after the onset of acute diarrhoea, a three-week-old, previously healthy female neonate presented with tachypnoea and feeding difficulties. At the emergency department she developed a cardiorespiratory arrest. Advanced cardiac life support was initiated, with on-going need for inotropic support at the intensive care. A wide spectrum antibiotic treatment was administered. A positive blood culture confirmed bacteraemia with Campylobacter jejuni. Transthoracic echocardiography revealed a dilated left ventricle with poor contractility. Holter monitoring revealed numerous runs of atrial tachycardia. Clinical diagnosis of bacterial myocarditis was based upon signs of heart failure combined with left ventricular dilatation, leucocytosis, arrhythmia and a positive Campylobacter jejuni blood culture. Upon early clinical and echocardiographic recovery, within a few days since her admission, a relapse occurred. Inotropic support was mandatory over a period of 2 months, without any signs of recovery. High dose and long-term intravenous antibiotics were administered. Forty days upon admission, immunoglobulin therapy at 1g/kg/day was initiated during three days. Gradually inotropic support could be weaned successfully. Further treatment included an angiotensin converting enzyme inhibitor and a loop diuretic. One year after the event she recovered a normal heart function.

Conclusions:
Underlying pathophysiology of myocarditis caused by Campylobacter jejuni is unclear. The time interval between the enteritis and the initial cardiac involvement was short, suggesting an initial direct myocardial injury and supporting our choice for prolonged aggressive antibiotic treatment. This myocarditis seemed to have a biphasic course. One possible explanation could be an immune mediated relapse and although immunoglobulin treatment was not implicated in other cases of bacterial myocarditis and their benefit is not proven in viral myocarditis, our patient recovered gradually after administration. Natural disease course cannot be excluded. Despite prolonged inotropic support, complete recovery occurred.