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Case Report

Investigation of an Infant with Failure to Thrive

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ABSTRACT

Over investigation continues to be a problem in the modern health care. Here we present a case of infant with failure to thrive, who went through a series of unnecessary investigations. We propose teaching residents a case-based diagnostic approach to investigation. A detailed history and complete physical examination would help in eliminating the need for intensive investigation. A 'car wash' approach in investigating an infant with FTT should be viewed critically.

ABBREVIATIONS

UTI: Urinary Tract Infection; UA: Urinary Analysis; FTT: Failure to Thrive; LP: Lumbar Puncture

CASE

A two-week-old infant who was admitted from the clinic for further workup and management of Failure to Thrive (FTT). After obtaining urine, blood and CSF culture, the infant was treated for 10 days with IV cefotaxime. All his labs on admission including complete blood count, comprehensive metabolic screen, and thyroid function tests were within normal limits. The blood and CSF cultures were negative. Infant was given the term formula with no extra nutritional additives or fluid rehabilitation. Infant fed well during the hospital stay and gained weight. The growth chart is shown in Figure 1.

DISCUSSION

The question posed in this brief report is: is full septic work up warranted in FFT? Because of abnormal urine analysis and positive urine culture (Figure 2), the infant was treated with IV antibiotics. A renal ultrasound is obtained to look for renal anomalies, which was reported as negative. The cause for infant's FTT was most likely nutritional rather than infectious, as infant was afebrile and active. Lai et el [1] in their excellent review of Urinary Tract Infection (UTI) in preterm and term infants clearly state that 'the gold standard for diagnosis of UTI is a urine culture that is positive for a single organism". Urinary tract infection could be insidious, so obtaining Urine Analysis (UA) and urine culture was appropriate. UA can give some relevant information including the specific gravity and pH, which would help with the differential diagnosis for syndrome of inappropriate secretion (SIADH) or renal tubular acidosis. Presence of protein and glucose could be very informative for diagnosis of nephrotic syndrome or diabetes. Urine culture on the other hand is difficult to interpret. There are many caveats- source of urine, method of collection, contamination, and interpretation. Lai et al [1] article discusses all these in detail.

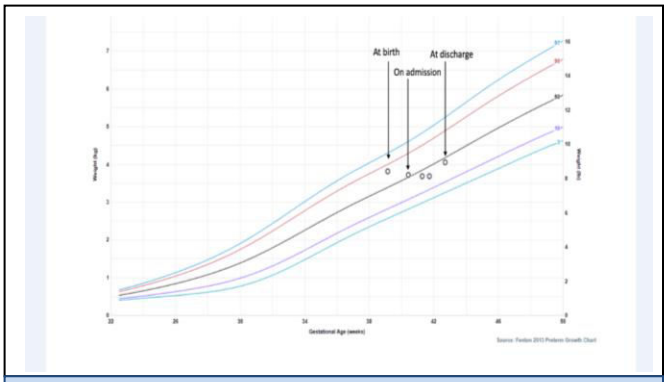

Figure 1: Growth chart showing failure to thrive and catchup.

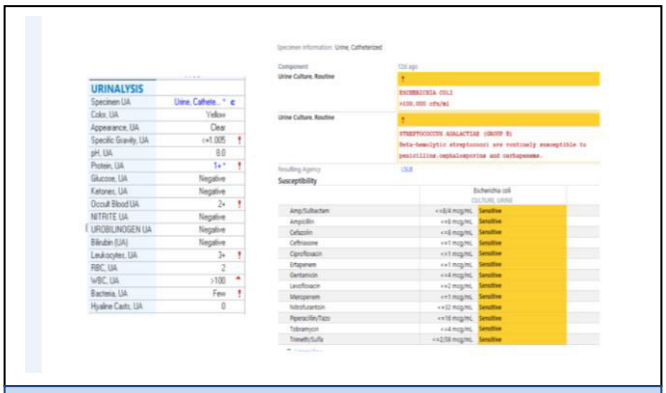

Figure 2: Results of urinary analysis and urine culture and sensitivity.

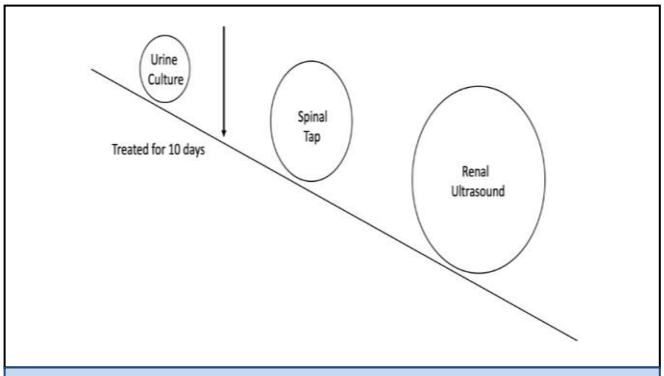

Figure 3: The snowball effect of investigations.

We see a snowball effect, as depicted in Figure 3, one investigation leading to another and so on. This is very well described by Basset and Rowinsky [2], where they discuss an infant with jaundice going through a series of unwanted investigation. This case highlights on the need for incorporating value-based care in pediatric residents' training programs, as pointed out by Dewan et al [3]. Investigations should be used wisely. Teaching residents to provide case-based diagnostic approach is important. A detailed history and complete physical examination would help in eliminating the need for intensive investigation. A 'car wash' approach in investigating an infant with FTT should be viewed critically.

CONFLICT OF INTEREST

None

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