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**DIAGNOSTIC VALUES OF PROCALCITONIN IN PEDIATRIC PATIENTS**

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10.1136/archdischild-2019-epa.929

**Background**

Sepsis is a life-threatening condition, and a major cause of mortality and morbidity in pediatric patients.

**Objective**

To determine the values of procalcitonin (PCT) as a reliable biochemistry markers for early diagnosis of sepsis in newborns, before availability of culture and C-reactive protein (CRP) results.

**Methods**

In this study we include the 27 (M:F=15:12) febrile newborns, 37 - 40 ± 2 GN with two or three clinical signs of sepsis from PICU at the University Children Hospital-Skopje. They have been divided into two groups: I group included 17 septic patients with negative blood culture and II group - 10 septic patients with positive blood cultures. Results of blood count (WBC), CRP and PCT, were recorded. Procalcitonin levels were measured by using an immunoassay system Vidas based on the Enzyme Linked Fluorescent Assay (ELFA) principles, at admission and 3–5 days after admission.

**Results**

Regardless of whether blood culture is positive or negative, the values of procalcitonin PCT at the admission were increased in all 27 febrile newborn infants (≥2 ng/mL). The values of C-reactive protein gradually increase after 24–36 hours at admission. The values of WBC increased at 18 patients, except in 9 pediatric patients with severe sepsis the WBC were decreased (WBC counts <4000). The second measurement of PCT, after 3 days, it is decreased. The value of PCT is a reliable parameter whether an appropriate antibiotic for the treatment is used.

**Conclusion**

We examined two parameters at febrile newborns with two or three clinical signs of sepsis, the values of PCT increased at the moment at admission, while the values of C-reactive protein gradually increase. The PCT measurement provided valuable information before availability of culture results.

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**NEONATAL SEIZURES REVEALING DUODENAL ATRESIA**

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10.1136/archdischild-2019-epa.931

**Introduction**

Atresia of the intestine is one of the most common reasons for intestinal obstruction of the newborn. As the ileum is the most frequently affected part, duodenum atresia is less frequent with an incidence ranging from 1 in 20,000 to 1 in 40,000 births. We report the case of a newborn with duodenal atresia.

**Observation**

This is a 3-day old female newborn admitted for abnormal movement. She comes from a complicated pregnancy of hydramnios.

The history backs to the birth marked by the installation of iterative vomiting.

Two days before admission, these vomits became bilious with refusal of feeding and occurrence of abnormal movements such as ocular reulsion and hypertonia.

At admission, the patient was icteric and severely dehydrated. The abdomen was de compressible without mass. She had a good axial and peripheral tonus with the presence of archaic reflexes. Two hours after admission, she had a convulsive seizure with head deviation eyes that recurred 2 times.

In biology, there was a hypochloremic metabolic alkalosis, acute renal failure with urea at 33.5 mmol/l and serum creatinemia at 517.83 μmol/l, the infectious balance was negative. The lumbar puncture was normal. Radio showed significant gastric distention with poor aeration of the rest of the digestive tract.

Abdominopelvic ultrasonography found hyperechoic kidneys related to functional renal failure, gastric distention, and umbilical vein thrombosis. It was then supplemented by a digestive opacification which objectified a duodenal atresia in its complete form. Our patient is operated after stabilization. He benefited from a side-lateral duodeno-duodenostomy. The postoperative course was simple. The reintroduction of the diet was progressive with good digestive tolerance. The patient was seen at the consultation with a follow-up of 3 months, she has a good weight gain and a normal transit.

**Conclusion**

Duodenal atresia is a relatively rare cause of bowel obstruction. Antenatal diagnosis when done allows better management from birth. This pathology remains a good prognosis when it is isolated.