

P-79

COVID-19 Presentation in Pediatric Patients with Visceral Transplantation

Papa-gobbi R², Serradilla J^{1,3}, Bueno A^{1,3},
Serrano-Fernández P², González-Sacristan R²,
Alcolea-Sánchez A², Hernández-Oliveros F^{1,3},
Ramos-Boluda E², Papa-Gobbi R¹

¹Transplant Group, La Paz University Hospital Health Research Institute (IdiPAZ). La Paz University Hospital, ²Intestinal Failure, Rehabilitation and Transplant Unit. La Paz University Hospital, ³Department of Pediatric Surgery. La Paz University Hospital

Introduction: Coronavirus disease 2019 (COVID-19) pandemic has become one of the most challenging episodes in the history of modern public health, with particular emphasis in high risk population. However, the evidence regarding their response to the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), the agent responsible for COVID-19 is scant. Herein we present the clinical course of the SARS-CoV-2 infection in four pediatric patients that had underwent visceral transplantation.

Methods: pediatric patients (3 with multivisceral transplant and 1 hepatointestinal transplant; median age: 13,75 years, range: 12-17 years) were diagnosed with SARS-CoV-2 infection by nucleic acid amplification test, antigen test or serologic anti-SARS-CoV-2 IgM detection. Lymphocytes count, clinical signs and seroconversion were assessed.

Results: 3/4 consulted for symptoms compatible with COVID-19 and had a mild clinical presentation. Patient I: headache and muscle pain, Patient II: Anosmia and agusia, cough and rhinorrhea, Patient III: sore throat, cough and rhinorrhea. Patient IV was asymptomatic and consult for epidemiological environment. Lymphocytes count at the time of diagnosis was between normal range (media: 3600 cells/ul of blood, range 2600-4600 cells/ul of blood) and, interestingly, no gastrointestinal symptoms were reported. Of note, immunosuppression was not suspended nor diminished during the episode. 4/4 were receiving Tacrolimus (blood levels: median 7.7ng/ml, range: 6.7-8.4 ng/ml) and 3/4 also corticoids (median 5mg/day, range 2-10mg/day). Finally, until today we could detect specific IgG antibodies against SARS-CoV-2 in serum after recovery in 3 of the patients (one is still pending).

Conclusion: The results presented here suggest that SARS-CoV-2 infection in pediatric patients with visceral transplantation is asymptomatic/mild. Interestingly, despite their graft altered immune status, no gastrointestinal symptoms were observed. Additionally, despite the high immunosuppression levels used, seroconversion was achieved in all patients so far. All together, these results suggest that collaboration between B and T cells was not affected by the pharmacological treatment and that pediatric patients would not constitute a risk group.

P-80

"Colostrum Supplement and Intestinal Adaptation after Intestinal Surgery and Short Bowel Syndrome: Review of the Literature"

Ugolini S¹, Negri E¹, Beabrun G¹, Zulli A¹, Cianci M¹,
Dell'Otto F¹, Coletta R¹, Morabito A¹

¹University Children's Hospital A. Meyer, University Of Florence

Introduction: Colostrum is a source of immune/growth factors, hormones and nutrients which aids the newborn in its adaption to extrauterine life. Its clinical use has been investigated as an immunological component, for use in infectious diseases and to lower the risk of bacterial translocation and sepsis in abdominal surgery. This article aims to investigate the current knowledge about the value of colostrum in enhancing mechanisms of adaptation in the resected bowel.

Methods: A MEDLINE systematic search was conducted following the queries of: "colostrumANDshort bowel syndrome", "colostrumANDintestinal adaptation", "colostrumANDintestineANDsurgery". After duplicate removal, abstracts were selected by inclusion criteria ("English", "trials about colostrum in short/resected bowel patients reporting an outcome analysis on the intestinal function").

Results: From a total of 105 papers, 18 duplicates were rejected, 8 trials matched eligibility. The trial populations were: "humans" (n=3) and "piglets" (n=6), with one article running experiments on both. Among humans, n=2 trials were on neonates and n=1 on adults. In all trials, prior surgery had led to massive bowel resection and individuals were tested either with bovine colostrum or control. Intestinal function was investigated by diverse clinical, morphological, and functional measures. Human studies demonstrated that neonates tolerated well the diet, whereas in adults it enhanced fecal output. No benefits of colostrum supplementation on intestinal function were observed in humans. In piglets, n=3 trials reported encouraging data, while n=2 described a similar outcome to controls. N=1 piglet trial showed preterms having a lower outcome compared to terms.

Conclusion: The outcome of colostrum clinical use in short bowel has still to be determined. Available trials are scarce, with limited populations and heterogenous conditions. One essential aspect for short bowel patients is colostrum tolerability which has been reported as feasible in the neonate although not in the adult due to increased diarrhoea. Secondary to the recent detection of breast milk stem cells and their healing potential (similar to the ones contained in amniotic fluid), this seems a promising future research area. Our concerns are about the quality of bovine colostrum and its storage conditions. Other studies are needed to investigate colostrum great potential in neonatal diseases.