IDENTIFICATION OF A NEW COMPLEMENT FACTOR H (CFH) MUTATION IN A PATIENT WITH PREGNANCY-ASSOCIATED ATYPICAL HEMOLYTIC-UREMIC SYNDROME (P-aHUS)

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INTRODUCTION and OBJECTIVES

P-aHUS is a rare clinical condition, characterized by a significant perinatal or maternal morbidity and mortality, as a loss of fetus can happen in 5%, and ESRD in 62% of cases[1].

P-aHUS, characterized by a clinical picture of severe thrombotic microangiopathy (TMA) can be related to gene mutations in proteins involved in the alternative pathway of complement[2].

METHODS

A pregnant at 32 week was admitted because of HELLP syndrome (Hemolysis, Elevated Liver enzymes and Low Platelets) and twin delivery was induced. As she did not respond to plasma infusion and steroid therapy we started Eculizumab therapy with sudden clinical improvement.

After extraction of DNA from venous blood, the patient were subjected to the genetic screening in genes of alternative complement pathway (CFH, MCP, CFI, CFB, C3, THBD) by gene sequencing, using primers yet described in literature[3].

RESULTS

The screening of mutations in the genes coding for the complement factors evidenced the presence of the SCR11 domain mutation in + 1G/A position of the exon 12-13 of CFH gene, which has not yet described in the literature. In addition, some polymorphisms have been identified, as follows: SCR1 (p.Val62Ile); SCR5 (p.Ala307Ala); SCR6 (p.His332Tyr); SCR8 (p.Ala473Ala). Finally, we found a described mutation in the exon 9 of C3 gene (c.100T>C; Prl314Leu).

CONCLUSIONS

We describe a new mutation in CFH gene in a patient affected by P-aHUS, not yet described in literature. Our case emphasizes the importance of a prompt start of therapy with Eculizumab in order to avoid dialysis and induce a rapid renal recovery. Future studies are need to understand how long such therapy should to be prolonged.

REFERENCES

1. Antonio F. Saad, Jorge Roman, Aaron Wyble, Luis D. Pacheco, Pregnancy-Associated Atypical Hemolytic Uremic Syndrome. Am J Perinatol Rep 2016;6
2. F. Fakhouri, L Roumenina, F Provot, M Sallée , L. Couzi, M. Essig, D. Ribes, Marie-Agnès Dragon-Durey, F Bridoux, E Rondeau,and V Frémeaux-Bacchi: Pregnancy-Associated Hemolytic Uremic Syndrome Revisited in the Era of Complement Gene Mutations
3. David Perez-Caballero, Carolina Gonzalez-Rubio, M. Esther Gallardo, Maria´ Vera,Margarita Lopez Trascasa, Santiago Rodrıguez de Cordoba, and Pilar Sanchez-Corral. Clustering of Missense Mutations in the C-Terminal Region of Factor H in Atypical Hemolytic Uremic Syndrome

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