HEMATOLOGY, TRANSFUSION AND CELL THERAPY

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Images in Clinical Hematology

Mushroom-shaped red blood cells (pincer cells): a brief update

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Red cells with cytoplasmic projections, resembling pincer-like cells, also known as mushroom- shaped red blood cells, as Figures 1 and 2, are usually associated with erythrocyte disorders, such as congenital dyserthropoietic anemias, hereditary spherocytosis associated with Banda-3 protein deficiency, disseminated intravascular coagulation, hemolytic-uremic syndrome, thrombotic thrombocytopenic purpura, kidney disease, microangiopathic hemolytic anemia, erythroleukemia and, more rarely, oxidative drug-induced hemolysis. However, a recent study have demonstrated a relationship between these cells and infection caused by Sars-CoV-2 in a pathophysiologic mechanism that possibly involves the occurrence of oxidative stress, which triggers progressive cascade of inflammation, known as citokines storm, that leads to red blood cell damage.[1–3]

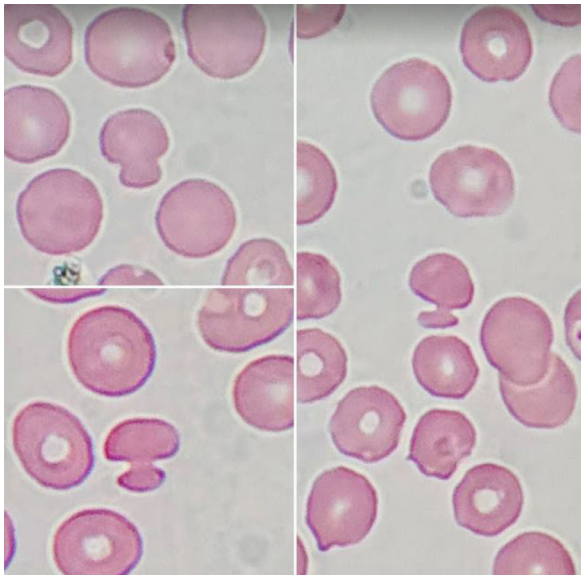

Figure 1 – Pincer cells in a patient with chronic kidney disease and diagnosed with COVID-19.

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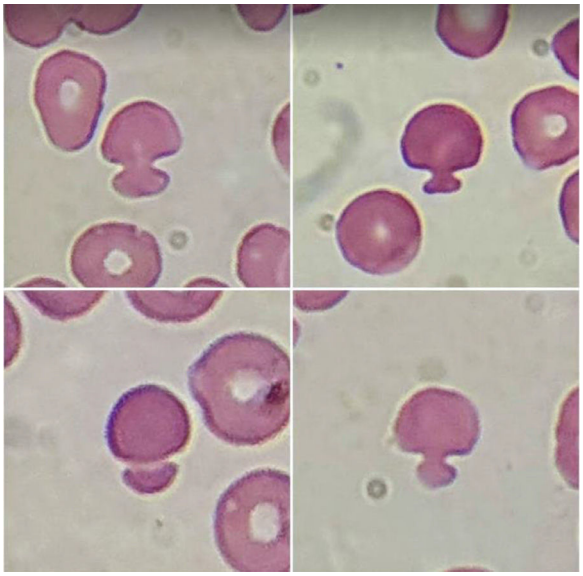

Figure 2 – Pincer cells in a patient with chronic kidney disease and diagnosed with COVID-19.

Conflicts of interest

The authors declare no conflicts of interest.

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