QUADRUPLE GESTATION WITH TWO SETS OF MONOZYGOTIC TWINS AFTER INTRACYTOPLASMIC SPERM INJECTION AND TRANSFER OF TWO EMBRYOS ON DAY 3: CASE REPORT AND REVIEW OF THE LITERATURE

O. Armijo Suárez, S. Lobo Martínez, B. Castro Martín, C. Sanz Pérez, P. Silva Zaragueta, C. Álvarez López, C. González Varea, J.M. Montejo Gadea, G. Leon Egido, C. San Juan Larín, J. de Santiago García,
La Paz Hospital, Madrid, Spain

OBJECTIVE: To describe an exceptional case of quadruple gestation (two sets of monozygotic twins) after intracytoplasmic sperm injection (ICSI) and transfer of two embryos after assisted hatching.

DESIGN: Case Report.

SETTING: Tertiary clinical and academic medical center.

PATIENT(S): A thirty-five-year-old patient who underwent an ICSI cycle.

INTERVENTION(S): After 1 year of primary sterility for andrologic subfertility, the patient underwent her first ICSI cycle, with transfer of two embryos on day 3 after assisted hatching.

MAIN OUTCOME MEASURE(S): Transvaginal sonogram performed at 4 weeks after embryo transfer showed a quadruple gestation: one of them was dichorionic-biamniotic and the other was monochorionic-biamniotic.

RESULT(S): After receiving extensive counseling, the couple decided to proceed to a selective reduction of a set of monozygotic twins. One of the remaining twins died in utero at 20 weeks. The patient is currently 33 weeks pregnant and presents a premature rupture of membranes.

CONCLUSION(S): Several factors have been involved in the etiopathogenesis of monozygotic twins in assisted reproductive technology: advanced maternal age, superovulation, and manipulation of the zona pellucida (ZP) including ICSI and assisted hatching, prolonged culture, and in vitro culture condition. It is possible that other factors may also play a role, especially in high-order monozygotic multiple pregnancies. It is necessary to determine the optimum number of embryos to be transferred in each case. All patients should be informed that monozygotic multiple pregnancies occur at a significantly higher rate after ART procedures and could be an important complication after IVF-ICSI treatment.