It has been proposed that supraphysiological hormone levels during ovarian stimulation for assisted reproductive techniques (ART) may adversely affect embryo implantation by several mechanisms: endometrial development asynchrony, genes and cytokines profile expression altered and directly effect on embryo develop. Objective: To determine the pregnancy outcome of embryo transfers performed with and without previous controlled ovarian hyperstimulation (COH) and compare results.

Study design: A retrospective comparative intra-subject study in a public fertility center- ART program of the HIGA San Martin La Plata.

Materials and methods: Study Population: 123 patients that underwent in in vitro fertilization (IVF) from May 2011 to June 2013. Two samples were obtained from the same population. Group A: 115 IVF with consecutive embryo transfer (IVF-ET) and group B: 36 vitri-warm embryo transfer (VET) were included. Clinical pregnancies were defined as intrauterine sac with fetal cardiac activity by ultrasound at 6 weeks. From the relation between embryos transferred/ intrauterine sac, was obtained the implantation rate. Variables measured: pregnancy rate and implantation rate. Statistical analysis: Percentage, and chi-square test. Alpha error: 0.05 Beta error: 0.10.

Results: GA (N=115) 20 clinical pregnancies (17.39%) GB (N=36) 13 clinical pregnancies (36%) p=0.03, Ch2 4.58, CI 0.16-0.85, OR 0.37. Implantation rate GA 9.73% vs GB 21.91% p=0.02, Ch2 4.93, CI0.17-0.84, OR 0.38.

Conclusion: We found a better outcome with VET (group B). This difference was statistically significant.

Commentaries: These results reassure the role of embryo vitrification in an IVF program, and could also be a possible approach to prevent the alleged adverse effects of ovarian hyperstimulation on the implantation process.