

G-SERIES CULTURE MEDIA SHOWN TO INCREASE BLASTOCYST DEVELOPMENT COMPARED TO CONTROL

Matsuoka et al from Minatomirai Yume Clinic presented their poster “Effects of hyaluronan on blastocyst development”¹ at the Annual Meeting of the Japanese Society of Clinical embryologists in January 2013.

Data was collected during 2012 and results are presented in the table below. Embryo culture was done either Vitrolife’s G-Series™ culture media or a mix of sequential culture media (control). Blastocyst scoring was performed using the criteria suggested by Gardner et al². Besides overall blastocyst development and blastocyst development of vitrified embryos, development in relation to patient age is presented.

Patient age did not differ between the groups (39.7 and 39.4, respectively). Results in the table show that good-quality blastocyst development is more frequent after culture in G-Series media containing

hyaluronan. Among the embryos meeting the criteria for cryopreservation (>BB), significantly more were of top quality or had better trophectoderm morphology after culture in the G-Series media. When analysing results in relation to patient age, similar significant differences were observed. No differences were found on early parameters such as fertilisation and cleavage.

The authors speculate that the effect of hyaluronan on blastocyst development may also be correlated to the already proven effect of hyaluronan on implantation³. The authors would like to further investigate this correlation.

		G-Series™		Control		p-value
		Number	%	Number	%	
Patients		809	-	1899	-	
Oocytes		1841	-	4057	-	
Fertilisation		1427	78	3123	77	NS
Cleavage		1404	98	3063	98	NS
Blastocyst development		590/1119	53	1034/2402	43	<0.05
Good-quality blastocysts for vitrification (>BB)		447/1119	40	772/2402	32	<0.05
Subgroups by age						
≤39	Blastocyst development	383/608	63	737/1389	53	<0.05
	Good-quality blastocysts for vitrification	289/608	48	553/1389	40	<0.05
≥40	Blastocyst development	207/511	41	297/1013	29	<0.05
	Good-quality blastocysts for vitrification	158/511	31	219/1013	22	<0.05
Vitrified blastocysts						
Top-quality blastocysts		156/447	35	161/772	21	<0.05
Good-quality ICM		202/447	45	324/772	42	NS
Good-quality trophectoderm		200/447	45	224/772	29	<0.05

1. Matsuoka Y, Saito S, Shimamura J, Kamiya N, Takahashi A, Shiroishi Y, Saito S, Shimizu Y, Shimizu J, Tokorohata K, Ishii Y, Nakamura T, Fujishiro E, and Kaijima H. Effects of hyaluronan on blastocyst development. Meeting abstract at the 18th Annual Meeting of the Japanese Society of Clinical Embryologists the 12th-13th of January 2013. 2. Gardner DK, Schoolcraft WB. In vitro culture of human blastocysts. In: Janson R, Moretimer D (eds). Towards Reproductive Certainty: Infertility and Genetics Beyond 1999. Carnforth: Parthenon Press, 1999, 378-388. 3. Bontekoe S, Blake D, Heineman MJ, Williams EC, and Johnson N. Adherence compounds in embryo transfer media for assisted reproductive technologies. Cochrane Database Syst Rev, Issue 7, CD007421, 2010.