



Successful ongoing natural pregnancies and healthy live births in women with low and very low antimullerian hormone levels in a private practice setting in Lima-Peru. A case series report.



Gisela Valer Chavez, MD¹. Ither Sandoval, MD² ;

1. Naprotecnologia y Fertilidad Natural Perú

2. President of the Peruvian Society of Obstetrics and Gynecology.

Background

In Peru, IVF centers usually advise women to consider ovidonation when they have low antimullerian hormone (AMH) values.

We know that other than age, few factors can predict the chances of natural fertility and the AMH predictive value for clinical pregnancy remains controversial.

We present a case series report of 10 patients, from February 2022 to April 2024. These women have ongoing natural pregnancies and healthy live births, although their AMH values were low(<1ng/ml) and very low (<0,4 ng/ml). This is the first report of its kind in our country.

REFERENCES

- Bliddal S, Feldt-Rasmussen U, Forman JL, Hilsted LM, Larsen EC, Christiansen OB, Nielsen CH, Kolte AM, Nielsen HS. Anti-Müllerian hormone and live birth in unexplained recurrent pregnancy loss. *Reprod Biomed Online*. 2023 Jun;46(6):995-1003.
- Lin C, Jing M, Zhu W, Tu X, Chen Q, Wang X, Zheng Y and Zhang R (2021) The Value of Anti-Müllerian Hormone in the Prediction of Spontaneous Pregnancy: A Systematic Review and Meta-Analysis. *Front. Endocrinol*. 12:695157.
- Hagen CP, Fischer MB, Mola G, Mikkelsen TB, Cleemann LH, Gravholt CH, Viuff MH, Juul A, Pedersen AT, Main KM. AMH and other markers of ovarian function in patients with Turner syndrome - a single center experience of transition from pediatric to gynecological follow up. *Front Endocrinol (Lausanne)*. 2023 Jun 29;14:1173600.
- Practice Committee of the American Society for Reproductive Medicine in collaboration with the Society for Reproductive Endocrinology and Infertility. Electronic address: ASRM@asrm.org; Practice Committee of the American Society for Reproductive Medicine in collaboration with the Society for Reproductive Endocrinology and Infertility. Optimizing natural fertility: a committee opinion. *Fertil Steril*. 2017 Jan;107(1):52-58.
- Qiu W, Luo K, Lu Y, Zhao J, Wang Y, Yang H, Sun Y, Zhang J; Shanghai Birth Cohort. Anti-Müllerian hormone has limited ability to predict fecundability in Chinese women: a preconception cohort study. *Reprod Biomed Online*. 2022 Jun;44(6):1055-1063.
- Gayete-Lafuente S, Moreno-Sepulveda J, Sánchez-Álvarez J, Prat M, Robles A, Espinós JJ, Checa MÁ. Anti-Müllerian hormone does not predict cumulative pregnancy rate in non-infertile women following four IUI cycles with donor sperm. *J Assist Reprod Genet*. 2024 Jul 10.
- Copp T, van Nieuwenhoven T, McCaffery KJ, Hammarberg K, Cvejic E, Doust J, Lensen S, Peate M, Augustine L, van der Mee F, Mol BW, Lieberman D, Jansen J. Women's interest, knowledge, and attitudes relating to anti-Müllerian hormone testing: a randomized controlled trial. *Hum Reprod*. 2024 Jul 28:deae147.

CASES PRESENTATION

Table 1. Clinical characteristics in the low AMH and very low AMH groups.

Variable	Age	Miscarriage	Parity	RRM newlydiagnosed condition/disease	Treatment before RRM	RRM Surgery
Low AMH (ng/ml)						
P1:0,8	31				02 IVF/01 IUI	Paratubal cyst
P2:0,68	32	01				
P3:0,43	33	03		Sjogren's Syndrome (Autoimmune disease)	02 IUI/OE	
P4:0,7	36		01			
P5:0,7	38	01				
P6:0,92	41		01			Grade IV endometriosis
Very low AMH (ng/ml)						
P7:0,259	33					
P8:0,104	34					
P9:0.05	39	02		-C677T heterozygous mutation on MTHFR gen.-Antithrombin III deficiency -Chromosomal polymorphism46, XX, 16qh+		
P10:0,39	41	02		-C677T homozygous mutation on MTHFR gen -Chromosomal polymorphism 46, XX, 9qh+		

DISCUSSION

Our cases could support the findings of several studies affirming that a decreased AMH level does not represent decreased fertility in young or old females. Evidence shows that serum AMH levels are not associated with fecundability women of childbearing age. Therefore, they should not be used as a fertility test or to deny access to infertility treatment. Likewise, the available evidence does not consistently suggest an increased risk of pregnancy loss or fetal abnormalities in naturally conceived pregnancies of women with lower ovarian reserve.

RESULTS

Table 2. Number of ongoing pregnancies and healthy live births in the low AMH and very low AMH groups.

Variable	Age	Ongoing Singleton Pregnancy (Weeks)	Healthy Live births At term	RRM treatment	Type of Delivery
Low AMH (ng/ml)					
P1:0,8	31		01 Female		Scheduled C-Section
P2:0,68	32	37			
P3:0,43	33	16		Hydroxicloroquine 400mg tid (Sjogren's Syndrome)/ progesterone 400mg/d/AAS 81mg	
P4:0.7	36		01 Male.		Scheduled C-Section
P5:0,7	38		01 Female		Scheduled C-Section
P6:0,92	41	35			
Very low AMH (ng/ml)					
P7:0,259	33		01 Male		Emergency C-Section: Arrest of descent.
P8:0,104	34		01 Female		Vaginal birth.
P9:0.05	39	19		- Methylfolate 5 mg / ASA 81 mg/day/ Progesterone 400mg/d until HCG positive. Then switched to enoxaparin 40 mg SC/24h.	

CONCLUSIONS

In these case series decreased AMH level does not represent decreased natural fertility in young or old females.

We consider that any preconceptional counseling or infertility treatment options should not be based in the misconception about the low and very low AMH values as predictors of failure to have a natural pregnancy and healthy live birth, to avoid creating anxiety to couples and, more important, referring women to ovidonation

This is the first report of its kind in our country.