Egyptian Fertility Sterility Society

Pregnancy Morbidity Associated with Antiphospholipid Syndrome (APS) Classification Criteria

What is known already?

Antiphospholipid syndrome (APS) is a systemic autoimmune disease characterized by arterial, venous, or microvascular thrombosis, pregnancy morbidity, or nonthrombotic manifestations in patients with persistent antiphospholipid antibodies (APL). Classification of APS, for the identification of homogeneous research cohorts, is currently based on the Sapporo criteria published in 1999 [1] and revised in 2006 [2].

The revised Sapporo criteria for APS require at least one of the clinical criteria and one of the laboratory criteria are met

The clinical features (thrombosis or pregnancy morbidity) and laboratory tests (for lupus anticoagulant [LAC] IgG/ IgM anticardiolipin antibodies [aCL], and/or IgG/IgM anti–β2-glycoprotein I antibodies [anti-β2GPI]) with at least 2 aPL tests performed at least 12 weeks apart [2].

The clinical criteria of pregnancy morbidity include:

1- Unexplained fetal death at GA ≥10 weeks.

2- Unexplained pregnancy losses ≥ 3 time at GA <10 week.

2-premature births GA < 34 weeks because of (eclampsia, preeclampsia, or placental insufficiency. [2].

What is New?

The American College of Rheumatology and European Alliance of Associations for Rheumatology have recently updated the classification criteria for pregnancy morbidity in APS (Revised criteria for pregnancy morbidity in APS antibody syndrome at September 2023) [3] &[4]

Changes included more explicit criteria for gestational age and placental insufficiency (table 1).

≥3 consecutive otherwise unexplained* prefetal deaths (<10 weeks 0 days) and/or early fetal deaths (10 weeks 0 days to 15 weeks 6 days)
or
≥1 fetal death (16 weeks 0 days to 34 weeks 0 days) alone (ie, no preeclampsia with severe features or placental insufficiency with severe features¶)
or
Preeclampsia with severe features (<34 weeks 0 days) with or without fetal death
or
Placental insufficiency with severe features (<34 weeks 0 days)¶ with or without fetal death

* If a detailed analysis of fetal morphology or genetic studies is not performed or unavailable, reasonable clinical judgment that the loss is unexplained should be used based on careful history and review of available medical records.

¶ Placental insufficiency with severe features is defined by fetal/newborn growth restriction (estimated fetal weight <10th percentile for gestational age or postnatal birth weight <10th percentile for gestational age) in the absence of fetal-neonatal syndromes or genetic conditions associated with growth restriction and at least one of the following severe features: Abnormal or nonreassuring fetal surveillance test(s) suggestive of fetal

hypoxemia (e.g., nonreactive nonstress test, low biophysical profile score [0 to 4 out of 10])

2- Abnormal Doppler velocimetry suggestive of fetal hypoxemia (eg, absent or reversed end-diastolic flow in the umbilical artery)

3-fetal/newborn growth restriction (eg, estimated fetal or postnatal birth weight <3rd percentile for gestational age)

Oligohydramnios (eg, amniotic fluid index ≤5 cm, deepest vertical pocket <2 cm)

4- histology showing maternal vascular malperfusion (eg, placental thrombosis/infarction, inadequate remodeling of the uterine spiral arteries [decidual vasculopathy], decreased vasculosyncytial membranes, increased syncytial knots, or decidual inflammation)

References:

1. Wilson WA, Gharavi AE, Koike T, et al. International consensus statement on preliminary classification criteria for definite antiphospholipid syndrome: report of an international workshop. Arthritis Rheumatol .;42:1309–11.1999.
2. Miyakis S, Lockshin MD, Atsumi T, et al. International consensus statement on an update of the classification criteria for definite antiphospholipid syndrome. J Thromb Haemost 2006;4:295–306. 2006.
3. Medha Barbhaiya, Stephane Zuily, Ray Naden, Alison Hendry, Florian Manneville, Mary-Carmen Amigo, Zahir Amoura, Danieli Andrade, Laura Andreoli, Bahar Artim-Esen, Tatsuya Atsumi, Tadej Avcin, Michael H. Belmont, Maria Laura Bertolaccini, D. Ware Branch, Graziela Carvalheiras, Alessandro Casini, Ricard Cervera, Hannah Cohen, Nathalie Costedoat-Chalumeau, Mark Crowther, Guilherme de Jesus,Aurelien Delluc Sheetal Desai, Maria De Sancho, Katrien M. Devreese, Reyhan Diz-Kucukkaya, Ali Duarte-Garcia, Camille Frances, David Garcia, Jean-Christophe Gris, Natasha Jordan, Rebecca K. Leaf,,Nina Kello, Jason S. Knight, Carl Laskin, Alfred I. Lee, Kimberly Legault, Steve R. Levine,Roger A. Levy, Maarten Limper, Michael D. Lockshin,1 Karoline Mayer-Pickel, Jack Musial,

Pier Luigi Meroni, Giovanni Orsolini, Thomas L. Ortel, Vittorio Pengo, Michelle Petri, Guillermo Pons-Estel, Jose A. Gomez-Puerta, Quentin Raimboug, Robert Roubey, Giovanni Sanna,urya, V. Seshan, Savino Sciascia, Maria G. Tektonidou, Angela Tincani,Denis Wahl, Rohan Willis, Cecile Yelnik, Catherine Zuily, Francis Guillemin, Karen Costenbader, and Doruk Erkan, on Behalf of the Classification Criteria Collaborators Arthritis & American College of Rheumatology Vol. 0, No. 0, Month 2023

4. Charles J Lockwood and Vincenzo Berghella, Antiphospholipid syndrome: Obstetric implications and management in pregnancy, UpToDate September 2023