

Dilemma in Clinical Practice - Classification of Mullerian Duct Anomalies

Brinderjeet Kaur*

DNB Obstetrics and Gynecology, Consultant, Department of Obstetrics and Gynecology, Santokba Durlabhji Memorial Hospital and Research Center, Jaipur, India

***Corresponding Author:** Brinderjeet Kaur, DNB Obstetrics and Gynecology, Consultant, Department of Obstetrics and Gynecology, Santokba Durlabhji Memorial Hospital and Research Center, Jaipur, India.

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The classification of Mullerian duct anomalies has been attempted in literature at various conferences, seminars, forums and proceedings but a crystal clear mandate is lacking which ultimately adds to confusion and dilemma. The brunt of ambiguity is borne by clinicians while making decision to operate or not to perform surgery as there are entities that are dealt with different treatment approaches as per the prevailing classification systems in literature. A workable classification system with clarity in terms of treatment options is dire need of hour.

To understand the issue, there are two broad classification system available-The American Society for Reproductive Medicine (ASRM) Classification (Figure 1) and The European Society of Human Reproduction and Embryology-European Society for Gynaecological Endoscopy (Figure 2 and 3) (ESHRE-ESGE).

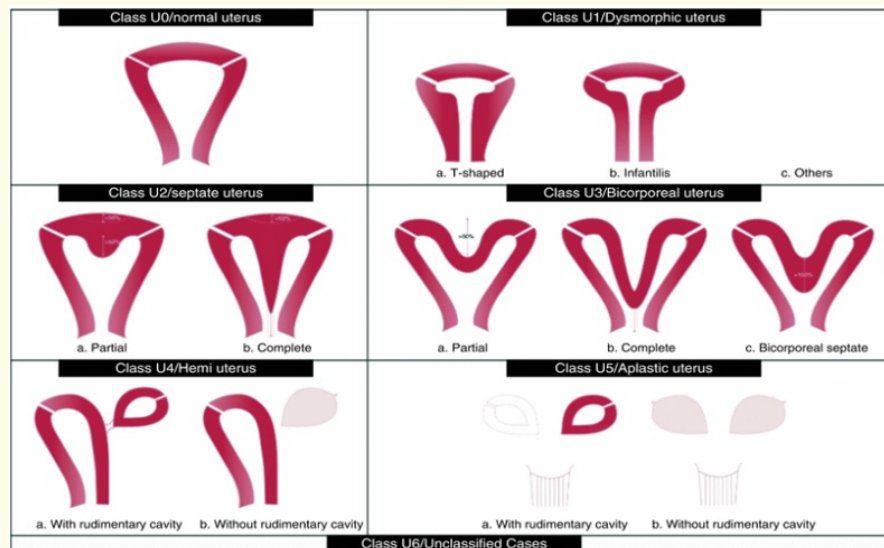


Figure 1: The ASRM Mullerian anomaly classification 2021 (MAC 2021).

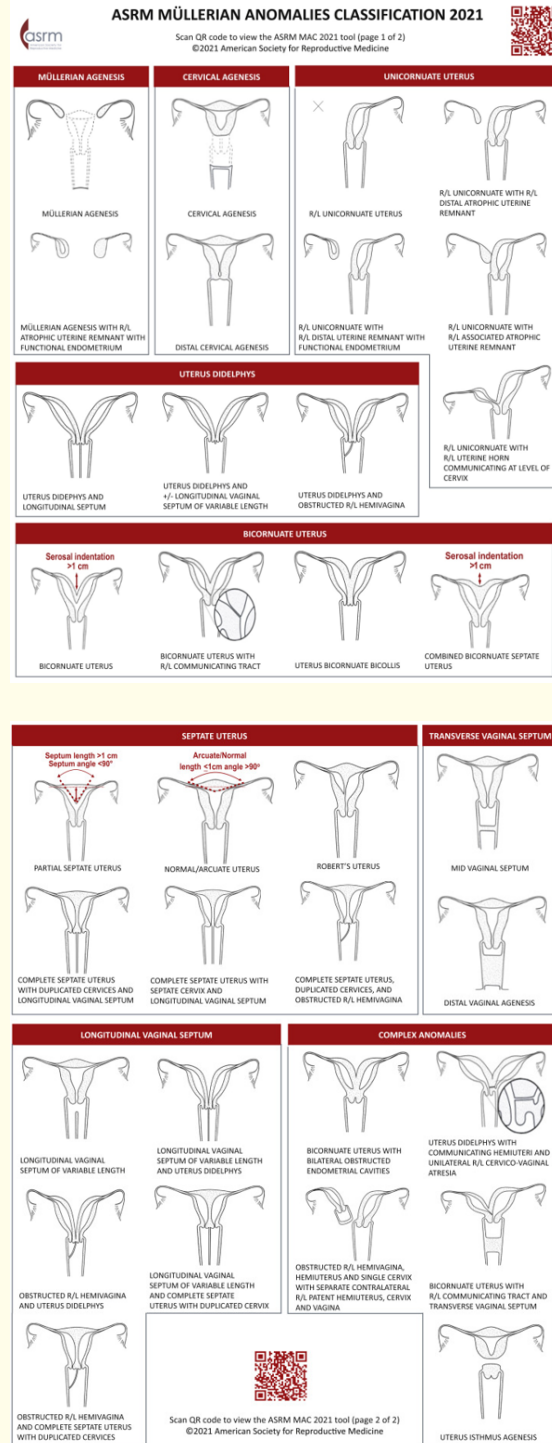


Figure 2: The ASRM Mullerian anomaly classification 2021 (MAC 2021).

ESHRE/ESGE Classification of Female genital tract anomalies			
Uterine anomaly			Cervical / vaginal anomaly
Main Class	Sub Class		Co-existent Class
U0	Normal Uterus		C0 Normal cervix
U1	Dysmorphic Uterus	a. T-shaped b. Infantilis c. Others	C1 Septate cervix C2 Double 'normal' cervix
U2	Septate Uterus	a. Partial b. Complete	C3 unilateral cervical aplasia C4 Cervical aplasia
U3	Bicorporeal Uterus	a. Partial b. Complete c. Bicorporeal septate	
U4	Hemi Uterus	a. with rudimentary cavity (communicating or not horn) b. No rudimentary cavity (horn without cavity / no horn)	V0 Normal vagina V1 Longitudinal non-obstructing vaginal septum
U5	Aplastic Uterus	a. with rudimentary cavity (bi- or unilateral horn) b. No rudimentary cavity (bi- or unilateral uterine remnants / aplasia)	V2 Longitudinal obstructing vaginal septum V3 Transverse vaginal septum and/or imperforate hymen
U6	Unclassified malformations		V4 Vaginal aplasia

Figure 3: ESHRE-ESGE classification of female genital tract anomalies.

The ASRM Mullerian Anomaly Classification 2021 (MAC 2021) [1] was built on the known strength, simplicity of the 1988 AFS Classification. It was updated to include cervical and vaginal anomalies utilizing an interactive format. It raised awareness to varied Mullerian anomalies and standardized terminology to simplify communication and facilitate searches in scientific database. It created an educational tool that included information regarding presentation, diagnosis and treatment.

The basis of the new system of classification by ESHRE-ESGE is the systematic categorization of the anomalies based on anatomy [2]. The design of the main classes and subclasses of this classification system is based on the deviation of uterine anatomy derived from the same embryological origin and on the anatomical variations of the main classes expressing different degrees of uterine deformity with clinical significance respectively. The cervical and vaginal anomalies are classified in independent supplementary subclasses.

The ESHRE-ESGE criteria were proposed to eliminate the subjective diagnosis of the original ASRM classification and enable differentiation between septate uterus and other similar conditions, independent of absolute morphometric criteria complementing descriptive criteria. Due to this parameters ESHRE-ESGE classification was associated with substantial increase in the frequency of septate uterus recognition compared to ASRM classification [3]. However, by separating malformations of the corpus uteri, cervix and vagina, the ESHRE-ESGE classification system can be more useful than ASRM for cataloguing complex anomalies of female reproductive system [2]. A major problem of the ESHRE-ESGE classification system is its classification or division and subdivision of the most common morphological forms and its impact on management [4]. The most important clinical implication is the risk of over diagnosis and overtreatment of septate uterus by ESHRE-ESGE system and warrants changing the criteria and discontinuing the use of uterine wall thickness as a reference value to detect internal and external structural distortions.

The updated ASRM MAC 2021 relies on simple diagrams to categorize, descriptive standardized terminology to identify, facilitate communication and search anomalies of uterus, cervix and vagina. The only drawback that needs to be addressed is that the New ASRM classification system represent a continuum of developmental variations as a result some anomalies may be in more than one group.

Despite the numerous and emerging classifications, the wide range of Mullerian anomalies are confusing and largely unknown, not only to obstetrician-gynecologists but also radiologists, pediatricians, Urologic surgeons, specialists in adolescent medicine and emergency medicine. This may be partly to rarity of anomaly, limited exposure of these providers to patients with Mullerian anomaly and lack of coordination between proponents of different classification systems to come to consensus. More research needs to be done with a view to not only diagnose the anomaly but avoid inappropriate and inadequate surgical intervention which may result in persistence of sufferings by the patient and loss or poor reproductive outcome.

Conflict of Interest

None.

Sources of Funding

Nil.

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