Embryogenesis of vagina and embryopathogenesis of Herlyn-Werner-Wunderlich syndrome

Sir,
I read with great interest the article titled, “Herlyn–Werner–Wunderlich syndrome presenting with infertility: Role of MRI in diagnosis” by Ahmad et al. published in the Indian Journal of Radiology and Imaging. The manuscript is excellent and informative. However, I would like to make the following contribution.

Herlyn–Werner–Wunderlich syndrome comprises of uterus didelphys, obstructed hemivagina and ipsilateral renal agenesis/anomaly. Hence, the acronym OHVIRA syndrome. The embryopathogenesis of OHVIRA syndrome is debatable. While the classical theory puts forth Mullerian (paramesonephric) roots of upper vagina, Acien’s hypothesis postulates mesonephric (Wolfian) origin of vagina in entirety except its lining epithelium from the Mullerian tubercle.

Common to both, the traditional and Acien’s view is formation of the kidney and the uterus with cervix. The former develops as a result of inductive effect of metanephric blastema (derived from the Wolfian duct at 5 weeks of gestation) into metanephros; for the latter, the mesonephros allows for proper positioning and subsequent caudal fusion of paramesonephric ducts. Wolfian birth of vagina, put forth by Acien (and supported by experiments of Sanchez on female rats), explains OHVIRA as a faulty development of mesonephros that results in three-fold effects; (a) failure of formation of metanephrich blastema from the Wolfian duct and hence subsequent renal agenesis/anomaly, (b) absence
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Aswani Y. Embryogenesis of vagina and embryopathogenesis of Herlyn–Werner–Wunderlich syndrome. Indian J Radiol Imaging 2016;26:417‑8.

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To conclude, I once again commend the authors for an excellent article. However, in light of new research, a fresh perspective towards the embryogenesis of vagina needs to be adopted.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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References

1. Ahmad Z, Goyal A, Das CJ, Deka D, Sharma R. Herlyn–Werner–Wunderlich syndrome presenting with infertility: Role of MRI in diagnosis. Indian J Radiol Imaging 2013;23:243‑6.
2. Acién P. Embryological observations on the female genital tract. Hum Reprod 1992;7:437‑45.
3. Sánchez-Ferrer ML, Acién MI, Sánchez del Campo F, Mayol-Belda MJ, Acién P. Experimental contributions to the study of the embryology of the vagina. Hum Reprod 2006;21:1623‑8.
4. Bajaj SK, Misra R, Thukral BB, Gupta R. OHVIRA: Uterus didelphys, blind hemivagina and ipsilateral renal agenesis: Advantage MRI. J Hum Reprod Sci 2012;5:67‑70.

Significance of color doppler imaging in leprosy

Sir,

I read with great interest the article titled, "Role of ultrasound in evaluation of peripheral nerves" by Lawande et al. [1] in the July–September 2014 issue of the Indian Journal of Radiology and Imaging, Volume 24, Issue 3.[1]

The article is informative and intelligently written with excellent depiction of pathologies on ultrasound. However, I would like to make the following contributions.

In the section on "Infective lesions" in the manuscript, the authors mention that there is presence of increased peri-, endoneural vascularity on Doppler in leprosy affected nerves.[1] This, however, is not in accordance with the prevailing body of literature.[2,3] In the study conducted by Jain et al.[2] and Martinoli et al.[3] none of the patients with leprosy had an increase in neural vascularity. Increased vascularity in peri-, endoneurium, unlike nerve enlargement and architectural distortion, is both a marker of acute neuritis as well as a differentiating factor between leprosy and leprosy‑associated lepra reactions (an immunologically mediated inflammatory state during leprosy).[2,3]

The differentiation is critical on account of two reasons; first, increased vascularity suggests lepra reactions, identification of which should prompt immediate antireaction therapy.[4] Failure to institute immediate treatment may result in irreversible nerve damage; sometimes in as less as 24 hours within the onset of lepra reactions.[4] Second, lepra reactions are characterized by recurrence.[2,4] Hence, ultrasound depiction of neural vascularity may help guide the duration of antireaction therapy.[2]

Recurrence is postulated to occur because the treatment is discontinued on clinical betterment without ultrasound evidence of nondetection of vascularity on Doppler.[2] Lepra reactions are potentially treatable, fairly common, and are a cause of significant morbidity.[4]

To conclude, an increased vascularity on Doppler interrogation helps differentiate leprosy from lepra reactions and is a marker of acute neuritis.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.