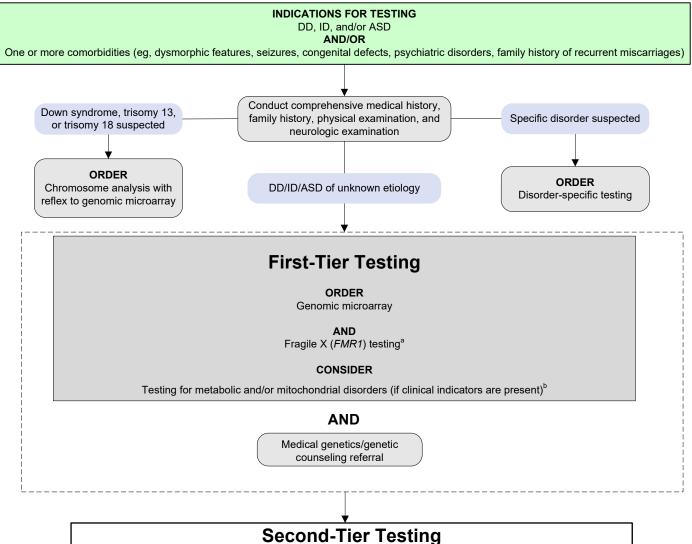
AR PConsult

Testing for Genetic Syndromes Related to Developmental Delay, Intellectual Disability, and

Autism Spectrum Disorder

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- Consider additional specific molecular studies to assess for:
 - · Rett syndrome, if the patient is female
 - PTEN-related disorders, if the patient has ASD and macrocephaly (head circumference >2.5 SDs above the
- X-linked disorder testing, if indicated by clinical and family history
- Whole exome sequencing
- Brain imaging studies

Abbreviations

ASD Autism spectrum disorder DD Developmental delay ID Intellectual disability SD Standard deviation

^aThe American College of Medical Genetics and Genomics suggests fragile X syndrome screening for male and female patients with compatible clinical features and family history. The American Academy of Pediatrics and the American Academy of Neurology recommend screening in all cases.

Consider metabolic testing (eg, acylcarnitine, amino acids, creatine, mucopolysaccharides, organic acids, creatine disorders panel, very long-chain and branched-chain fatty acids profile, uric acid, pyridoxine-dependent epilepsy panel [includes pipecolic acid and total AASA-P6C]) and review of newborn screening results even if there is low incidence/suspicion because intervention may be possible. Clinical indicators may include poor feeding, vomiting, dehydration, lethargy, hypotonia, and seizures in the newborn period. Clinical indicators outside of the newborn period exhibit marked variability and may be episodic and/or progressive.

References

- Michelson DJ, Shevell MI, Sherr EH, et al. Evidence report: Genetic and metabolic testing on children with global developmental delay: report of the Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society. Neurology. 2011;77(17):1629-1635.
- Moeschler J, Shevell M, Committee on Genetics. Comprehensive evaluation of the child with intellectual disability or global developmental delays. *Pediatrics*. 2014;134(3):e903-e918. Schaefer B, Mendelsohn NJ, Professional Practice and Guidelines Committee. Clinical genetics evaluation in identifying the etiology of autism spectrum disorders: 2013 guideline revisions [published correction appears in Genet Med. 2013;1(8):669]. Genet Med. 2013;15(5):399-407.