MISSION FULLERTON GENETICS CENTER

Co-management Guide

Genetics	Guidelines for the management of the child with several café au lait lesions

Guidelines Referenced	1. GeneReview for NF1: https://www.ncbi.nlm.nih.gov/books/NBK1109/ 2. American Academy of Pediatrics–Health supervision for children with Neurofibromatosis: http://pediatrics.aappublications.org/content/121/3/633
Background	Many individuals have one or two café au lait lesions (CAL), but when there are several café au lait lesions, the question arises could there be an underlying genetic syndrome. The most common genetic syndrome associated with multiple café au lesions is Neurofibromatosis Type I (NF1). The clinical diagnosis of NF1 requires the presence of <u>at least 2 of the following findings</u>: 1. Six or more café-au-lait lesions (5mm in pre-pubertal and 15mm in post-pubertal individuals) 2. Two or more typical neurofibromas or the presence of one or more plexiform neurofibromas. 3. Lisch nodules of the iris. 4. Axillary and/or inguinal freckling. 5. Optic glioma. 6. Consistent skeletal dysplasia 7. Family history of a first degree relative with Neurofibromatosis Type 1. Important points about the above list: - It is common for café au lesions to be the first finding of possible NF1 and other findings often present over the next several years. The typical progression of findings is CAL lesions, axillary and/or inguinal freckling at 4 years or greater, lisch nodules at 6-8 years or older, neurofibromas at puberty (except for plexiform neurofibromas which can present at less than 1 year of age). -Regular neurofibromas have a rubbery feel (tip of the nose) whereas plexiform Neurofibromas have a softer feel (like a sponge). -Lisch nodules are best seen by the ophthalmologist, at which time possible optic gliomas can also be evaluated (Lisch nodules are seen in >90% of individuals with NF1 while optic gliomas are rare). -The skeletal dysplasia present in NF1 is typically associated with bowing of the tibia. The presence of bowing of the tibia and café au lait lesions in an infant is almost always due to NF1. -If there is a family history of NF1 in a first degree relative (either parent), then the presence of six or greater café au lait lesions is sufficient to make the diagnosis of NF1. -There are individuals with isolated café au lait lesions who do not have NF1 or another obvious genetic syndrome. -50% of individuals with NF1 have a de novo mutation in the NF1 gene and will not have a family history of NF1. So, lack of a family history does not rule out NF1.
Initial Evaluation	Therefore, when presented with a child with several café au lait lesions it is important to obtain a family history to determine if there are first degree relatives with NF1 (diagnosed

	or undiagnosed). Again, it's not unusual for a parent to have a one, two, or three café au lait lesions, but numerous café au lesions >15 mm in size would be suspicious for NF1. A careful skin exam of the child for café au lait lesions, axillary or inguinal freckling, skeletal exam for bowing of the lower extremities (rare), and the presence of lumps or bumps of the skin. Referral to ophthalmology to evaluate for the presence of lisch nodules of optic gliomas.	
Initial Management	If an individual does not meet the criteria for the clinical diagnosis of NF1 and has isolated café au lait lesions, we suggest the following: * Yearly ophthalmologic evaluations * Yearly physical exams with the same considerations as noted for the initial evaluation. * Early medical care for any evidence of neurologic or ophthalmologic sequelae, such as a change in visual ability, increase in the frequency or severity of headaches, or evidence of any other neurologic findings.	
When to Refer	If an individual meets the criteria for the diagnosis of NF1, then a referral for a genetic consultation should be pursued.	
Pre-Visit Work Up	Referral to ophthalmology	
Co-management Strategy (as appropriate)	**Specialist scope of care** 1. Genetics involvement in initial diagnosis and education concerning NF1. 2. Genetics follow up with any ongoing concerns.	**Primary care scope of care** 1. Annual physical exam, with particular attention to the skin, skeleton, cardiovascular system, and neurologic systems. 2. Annual ophthalmologic evaluation in early childhood, with less frequent examination and older children and adults 3. Regular developmental assessment by screening questionnaire (in childhood) 4. Regular blood pressure monitoring 5. Referral to an appropriate specialist for abnormalities or concerns
Return to Primary Care Endpoint	Point at which care can be transferred back to primary care… 1. After the initial genetics evaluation, with subsequent genetics follow up as indicated.	