UCSF PEDIATRIC UROLOGY

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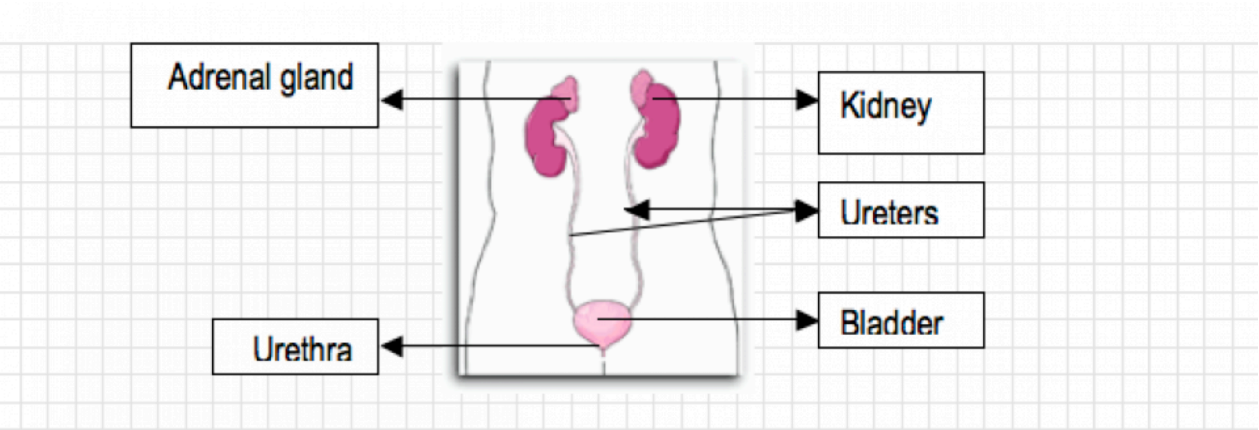
Hematuria

What is Hematuria?

The word hematuria comes from the Latin heme, for blood and uria for urine. Hematuria is when there is an unusual amount of red blood cells in the urine, as a small number of blood cells is considered normal. Hematuria can run in families. The blood can come from two places, either the kidneys or the lower structures such as the ureters, bladder or urethra. The shape of the cells seen under the microscope can help determine the origins of the blood. If your child has blood coming from the kidneys, s/he will see a nephrologist (kidney specialist). If the blood is coming from the lower structures, s/he will see a urologist (ureter, bladder & urethra specialist).



What causes blood loss from the kidneys?

When the blood cells are coming from the kidneys they are typically coming from the part called the glomerulus. This is usually caused by some type of inflammatory or immunologic problem, or kidney stones. If the blood cells in your child's urine seem to be coming from the kidneys then your nephrologist can order several different types of blood tests to figure out which type of problem is occurring, and what to do about it.

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What causes blood loss from the ureters, bladder or urethra?
When blood cells are coming from the lower structures it is most often due to infection, although certain drugs, x-ray contrast, kidney stones, tumors, or urine flow blockages can cause bleeding as well. Your urologist may order certain imaging tests (ultrasound or x-ray) as well as urine tests for infection to figure out which type of problem is occurring, and what to do about it.

What is urethrorrhagia?
Urethrorrhagia is bleeding from the urethra due to irritation, infection, trauma or stricture (narrowing). Sometimes urethrorrhagia occurs and a reason is never found (idiopathic). In a large number of cases it goes away by itself without treatment.

What tests may be ordered?
Blood tests can determine how well your child's kidneys are functioning (BUN, creatinine, electrolytes). Urine tests can tell more about how the kidneys are functioning by what is in the urine (creatinine clearance, calcium-to-creatinine ratio, urine analysis and culture). Imaging studies such as an ultrasound show the structure of the kidneys, ureters, and bladder.

What can be done to treat hematuria?
The treatments for hematuria depend on where the blood is coming from. If it is coming from the kidneys your nephrologists can use several different medications to help treat the problem. If it is coming from lower down in the urologic tract (ureters, bladder or urethra) the urologist can surgically remove the source (such as a stone), or may suggest medications, rest, dietary changes or a timed voiding regime to prevent urine retention in the bladder.
The only types of hematuria that can be prevented are from infection and trauma, such as from falling on a bicycle cross bar or getting hit in the groin. Urinary tract infections can be largely prevented with good hydration and frequent urination with complete emptying of the bladder. Genital tract trauma can be prevented with such measures as padding bicycle cross bars and wearing protective undergarments (cups for boys or padded undershorts for girls) when playing sports such as baseball, softball and soccer.

Further testing

If your child's hematuria doesn't go away by itself or if the cause is unclear, your doctors may want to perform a cystoscopy (using an endoscope to look into the bladder and urethra directly while your child is under anesthesia) or a kidney biopsy (taking a tiny piece of kidney for direct examination under the microscope) which is also performed either under anesthesia or moderate sedation. While more invasive, the advantage to these tests is that they allow for a direct look at the urologic system rather than the indirect look from blood and urine testing. The advantages, disadvantages and risks of these tests will be thoroughly discussed with you before they are performed.

See the next page for contact information.

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Appointments & Location

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