

SUBSPECIALIST CONSULT

Treating Sports Overuse Injuries

Overuse injuries are very common in children and teenagers, especially among kids who play sports throughout the year.

A high volume of sports puts your patients at higher risk for an overuse injury. Ask which sports they play, how often they play them, and how many teams they play for when taking the patient history. It is more and more common now that kids play on multiple teams at the same time or that sports seasons overlap. Here in the South, for example, baseball can start in January or February, while basketball – a winter sport – is still going on.

Year-round participation in multiple sports has an advantage as well – it becomes a form of built-in cross training. Your patients will be using the same muscles but developing them in different ways.

Encourage your athletic patients to play different sports and discourage “early specialization.” You can counsel patients regularly about sports diversification – during well-child visits and school or sports physical examinations. Patients who play football or soccer in the fall; basketball or wrestling in the winter; and then softball or lacrosse in the spring

generally are at a lower risk for overuse injuries.

In contrast, specialization in the same sport throughout the year increases the risk for overuse injuries as well as “burnout.” For example, a child who starts at age 7 or 8 years and plays the same sport for years might find participation becomes less fun by age 13 or 14 years. In some cases, parents get enthusiastic, pay for private lessons to extend the “season” to 12 months, and the kids just never have a time to rest.

For some families, it seems like success of the team or success on the playing field becomes more important than the health of the child. You can face a dilemma if you recommend rest for a child about to play a big game or tournament. The best way I found around that is to spend sufficient time to explain why you are making your recommendations. If you just say, “His knee hurts, and he shouldn’t play,” the patient and parents are less likely to be compliant.

We give advice. We rarely forbid a kid

from playing. But you can explain what could happen if they don’t follow recommendations. You might say something like, “Here is what I think you have, here is what I think you should do, and here’s why. If you don’t, the risk of making this a stress fracture is higher.” You

can also explain that a non-surgical elbow injury could become surgical if you continue to throw, play, or tumble.

Pediatricians can manage most overuse injuries. Watch for signs that can warrant referral, however, such as a swollen joint, limitation of joint movement, or symptoms of trauma/acute injury. Consider consulting a subspecialist when the child can

not completely bend or extend the elbow, for example. These findings suggest something worse than just overuse.

In general, the best way to treat an overuse injury is to underuse the affected area. Apply the PRICE techniques (protection, rest, ice, compression, elevation, medication, and [physical therapy] modalities) for 2 or 3 days. If there is no improvement, expand your differential diagnosis. Overuse injuries should improve quickly if patients start underusing the affected area in addition to modifying their workouts and using ice and anti-inflammatory medications.

Recommend the patient back off after you identify the likely source of pain. If a baseball player presents with elbow pain, for example, he might improve by pitching less or switching from shortstop to first base. Rarely do children need to stop playing altogether. Modification of the workout a little bit might be all it takes to give the body a chance to adapt. You could recommend a child play only part of the soccer game or avoid particular conditioning drills during practice, for example.

An overuse injury is defined as repetitive, submaximal stress applied to a tis-

sue that occurs when the adaptive capability of the tissue is exceeded and injury results. A blister is a perfect example. If you put on a new shoe that starts rubbing your foot too much, eventually the skin breaks down. But if you wear the new shoes for a little bit, then switch to sandals, then boots, and finally put your new shoes back on, you slowly introduce those stresses. This way, the body has a chance to adapt, the skin will become callused, and you won’t develop a blister.

Acute trauma is another reason to consider referring the child to a sports medicine specialist. If a child comes to you with instant pain from a jump off the monkey bars or a slide into home, she should be referred to rule out something more serious, such as a fracture or a cartilage or a ligament tear.

Another time to refer is anytime you feel uncomfortable. If you sense something isn’t right, you will never be faulted for referring the patient to a specialist. So, when in doubt, go ahead and refer.

Typically, a good history and physical examination will be sufficient, with or without x-rays, for a pediatrician to determine the best recommendations for the patient.

Although x-rays are a necessity for evaluation of most orthopedic or sports injuries, it is preferable to refer the child and have the subspecialist order imaging tests. This avoids duplication of radiation exposure for the child and the unnecessary time and expense of repeated x-rays. In addition, laboratory assays typically do not help in the evaluation of a suspected overuse injury, unless you suspect a comorbid condition such as arthritis or joint infection.

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DAVID L. MARSHALL, M.D.

Pataday™
(olopatadine hydrochloride
ophthalmic solution) 0.2%

INDICATIONS AND USAGE

PATADAY™ solution is indicated for the treatment of ocular itching associated with allergic conjunctivitis.

CONTRAINDICATIONS

Hypersensitivity to any components of this product.

WARNINGS

For topical ocular use only. Not for injection or oral use.

PRECAUTIONS

Information for Patients

As with any eye drop, to prevent contaminating the dropper tip and solution, care should be taken not to touch the eyelids or surrounding areas with the dropper tip of the bottle. Keep bottle tightly closed when not in use. Patients should be advised not to wear a contact lens if their eye is red.

PATADAY™ (olopatadine hydrochloride ophthalmic solution) 0.2% should not be used to treat contact lens related irritation. The preservative in PATADAY™ solution, benzalkonium chloride, may be absorbed by soft contact lenses. Patients who wear soft contact lenses and whose eyes are not red, should be instructed to wait at least ten minutes after instilling PATADAY™ (olopatadine hydrochloride ophthalmic solution) 0.2% before they insert their contact lenses.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Olopatadine administered orally was not carcinogenic in mice and rats in doses up to 500 mg/kg/day and 200 mg/kg/day, respectively. Based on a 40 µL drop size and a 50 kg person, these doses were approximately 150,000 and 50,000 times higher than the maximum recommended ocular human dose (MROHD). No mutagenic potential was observed when olopatadine was tested in an *in vitro* bacterial reverse mutation (Ames) test, an *in vitro* mammalian chromosome aberration assay or an *in vivo* mouse micronucleus test. Olopatadine administered to male and female rats at oral doses of approximately 100,000 times MROHD level resulted in a slight decrease in the fertility index and reduced implantation rate; no effects on reproductive function were observed at doses of approximately 15,000 times the MROHD level.

Pregnancy:

Teratogenic effects: Pregnancy Category C

Olopatadine was found not to be teratogenic in rats and rabbits. However, rats treated at 600 mg/kg/day, or 150,000 times the MROHD and rabbits treated at 400 mg/kg/day, or approximately 100,000 times the MROHD, during organogenesis showed a decrease in live fetuses. In addition, rats treated with 600 mg/kg/day of olopatadine during organogenesis showed a decrease in fetal weight. Further, rats treated with 600 mg/kg/day of olopatadine during late gestation through the lactation period

References:

1. Wolters Kluwer Pharma Solutions, Source® Pharmaceutical Audit Suite, August 2010-September 2010, among all specialties.
2. Abelson MB, Gomes PJ, Pasquini T, Edwards MR, Gross RD, Robertson SM. Efficacy of olopatadine ophthalmic solution 0.2% in reducing signs and symptoms of allergic conjunctivitis. *Allergy Asthma Proc.* 2007;28:427-433.
3. Granet DB, Amin D, Tort MJ. Evaluation of olopatadine 0.2% for the elimination of ocular itching in the conjunctival allergen challenge (CAC) model. Poster presented at: Western Society of Allergy, Asthma and Immunology; January 24-28, 2010; Maui, HI.
4. www.FingertipFormulary.com. Accessed June 17, 2010.

showed a decrease in neonatal survival and body weight. There are, however, no adequate and well-controlled studies in pregnant women. Because animal studies are not always predictive of human responses, this drug should be used in pregnant women only if the potential benefit to the mother justifies the potential risk to the embryo or fetus.

Nursing Mothers:

Olopatadine has been identified in the milk of nursing rats following oral administration. It is not known whether topical ocular administration could result in sufficient systemic absorption to produce detectable quantities in the human breast milk. Nevertheless, caution should be exercised when PATADAY™ (olopatadine hydrochloride ophthalmic solution) 0.2% is administered to a nursing mother.

Pediatric Use:

Safety and effectiveness in pediatric patients below the age of 3 years have not been established.

Geriatric Use:

No overall differences in safety and effectiveness have been observed between elderly and younger patients.

ADVERSE REACTIONS

Symptoms similar to cold syndrome and pharyngitis were reported at an incidence of approximately 10%.

The following adverse experiences have been reported in 5% or less of patients:

Ocular: blurred vision, burning or stinging, conjunctivitis, dry eye, foreign body sensation, hyperemia, hypersensitivity, keratitis, lid edema, pain and ocular pruritus.

Non-ocular: asthenia, back pain, flu syndrome, headache, increased cough, infection, nausea, rhinitis, sinusitis and taste perversion.

Some of these events were similar to the underlying disease being studied.

DOSAGE AND ADMINISTRATION

The recommended dose is one drop in each affected eye once a day.

HOW SUPPLIED

PATADAY™ (olopatadine hydrochloride ophthalmic solution) 0.2% is supplied in a white, oval, low density polyethylene DROP-TAINER® dispenser with a natural low density polyethylene dispensing plug and a white polypropylene cap. Tamper evidence is provided with a shrink band around the closure and neck area of the package.

NDC 0065-0272-25

2.5 mL fill in 4 mL oval bottle

Storage:

Store at 2°C to 25°C (36°F to 77°F)

U.S. Patents Nos. 5,116,863; 5,641,805; 6,995,186; 7,402,609

Rx Only

Alcon®

Mental Health Screening Registry

The TeenScreen National Center for Mental Health Checkups at Columbia University is establishing a registry for primary care providers who offer mental health screening during routine adolescent care. The Columbia University TeenScreen Registry is a resource for information sharing among those providers. Registrants will receive free evidence-based screening questionnaires, patient education materials, and access to a private online community to share information about mental health screening in primary care. They also will receive a certificate from Columbia University. Their profile information will be listed on the public page of the registry Web site.

Launching in June, the registry will be open to pediatric primary care providers

who use evidence-based questionnaires to identify teens with depression, anxiety, and other mental disorders. Such questionnaires need not be the ones provided by TeenScreen.

The TeenScreen National Center for Mental Health Checkups at Columbia University is a nonprofit health initiative, and national policy and resource center. The TeenScreen National Center is affiliated with the Columbia University division of child and adolescent psychiatry in New York.

To learn more, visit www.teen-screen.org.

Providers may enroll in the registry now or request more information about adolescent mental health screening in primary care practice at <http://registry.teen-screen.org>.