

Testing Needed for Suspected Lyme Borreliosis

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WARSAW — While erythema migrans is the presenting manifestation of Lyme borreliosis in the majority of cases, nonspecific symptoms predominate in many infected children.

Thus, serologic testing should be considered for these children who have a history of tick bite or who have visited a wooded area, Dr. n. med. Ewa Duszczyk said in a poster at an international congress of the World Society for Pediatric Infectious Diseases.

A group of 171 children with suspected Lyme borreliosis and who ranged in age from 6 months to 17.5 years underwent serologic testing with an enzyme-linked immunosorbent assay (ELISA). A total of 111 (65%) had a history of tick bite, and 60 (35%) had visited a wooded location.

They were divided into two groups: those with erythema migrans (104 children) and those with nonspecific symptoms such as

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other skin lesions, lymphadenopathy, fever, and pain and/or edema of joints (67 children).

In the group with erythema migrans, 74 (71%) children were seropositive, 72 with IgM antibodies to *Borrelia*

burgdorferi, 17 with IgG antibodies, and 13 with both IgM and IgG antibodies, according to Dr. Duszczyk and her colleagues in the department of children's infectious diseases, Medical University of Warsaw.

In the group with nonspecific symptoms, antibodies were detected in 16 (24%) children. Of these, IgM antibodies were detected in 13 children, IgG in 5, and both IgM and IgG in 2.

All children were treated to symptom resolution. In 35 seropositive children, serologic testing was repeated after 2-20 months; all showed a decline in IgM levels. In three cases followed for 13, 16, and 20 months, respectively, IgM antibodies were still present even though no clinical symptoms remained.

Serology can therefore be used to monitor treatment to some extent, but the persistent presence of antibodies does not necessarily indicate treatment failure, she cautioned.

In another poster session, Prof. dr. hab. Teresa Wozniakowska-Gesicka noted that in a series of 87 children with confirmed Lyme borreliosis, only 57.4% had a history of contact with a tick. In 42.5% of the infected children, symptoms were nonspecific, whereas, in 28.7%, neuroborreliosis was diagnosed with symptoms that included facial palsy, meningitis, cranial nerve palsy, paresthesias, radiculoneuritis, and mental disturbances. Erythema migrans and acrodermatitis chronica atrophicans

were observed in 19.5%, and arthritis in 9.3%, reported Dr. Wozniakowska-Gesicka of the department of pediatrics, Polish Mother's Hospital, Lodz, Poland.

Acrodermatitis chronica atrophicans is seen primarily in European borreliosis, and is usually associated with infection with *B. afzelii*.

All children received oral amoxicillin or tetracycline, and those with neuroborreliosis were given ceftriaxone intravenously for 3-4 weeks. Complete recovery was

seen in 72 (83%) of the children following the first course of therapy.

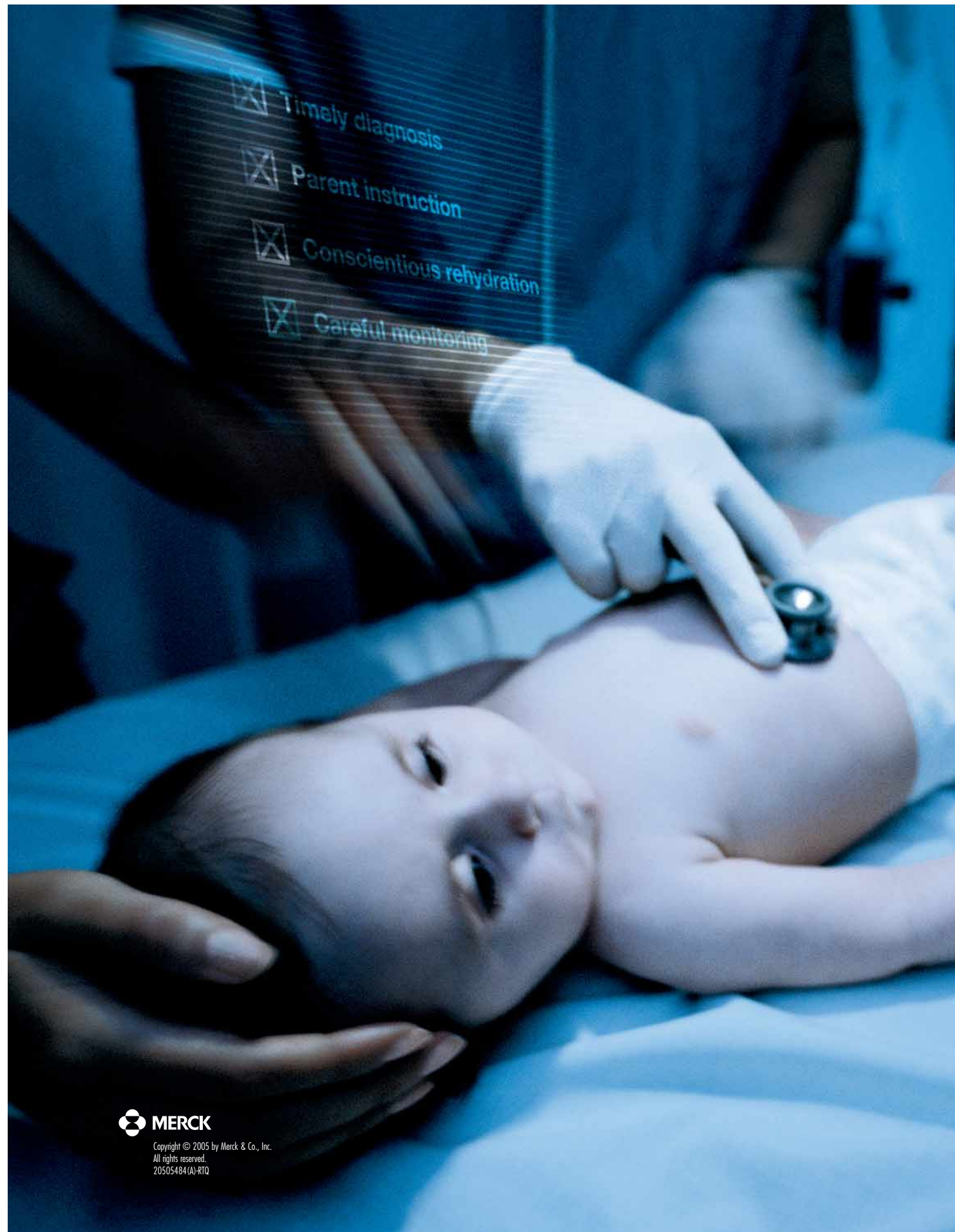
Improvement was first observed in children with erythema migrans, 5-7 days after treatment began. At 7-10 days those with facial palsy began to respond, as did those with meningitis after 10-14 days.

Recovery following a second course of treatment with amoxicillin or ceftriaxone was seen in four children with fever, in three with headache, in two with nerve palsy, in two with gonitis, and in one with

mental disturbances and acrodermatitis chronica atrophicans.

One patient with radiculitis improved after a second course, but muscular atrophy persisted. One child with palsy of cranial nerve VIII experienced irreversible unilateral deafness despite three courses of treatment.

Early diagnosis and directed treatment are needed in this serious diagnostic and therapeutic problem, Dr. Wozniakowska-Gesicka said. ■



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