

# Study finds Ponseti method of clubfoot correction

February 1 2010

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Clubfoot affects one in a thousand babies born in the United States, but with proper corrective treatment and follow-up, infants born with clubfoot can have feet compatible with an active, normal lifestyle. A new study in the February 2010 issue of the *Journal of Bone and Joint Surgery* (JBJS) compared two common treatment options for clubfoot - Ponseti method and surgical treatment.

"While more conservative treatment methods have become popular in the United States over the last several years, surgical treatment has been the primary option in New Zealand until quite recently," explained Matthew Halanski, MD, who authored the study with mentors at the Starship Children's Hospital in Auckland, New Zealand.

"This is the first controlled prospective study to compare the short-term outcomes for clubfeet treated either surgically or with the Ponseti method," continued Dr. Halanski.

Fifty-five patients with 86 clubfeet were treated as part of the study. Forty patients' [feet](#) were treated with the Ponseti method. Forty-six were treated with surgery and casting. The average number of casts per patient was six in the Ponseti Group and 13 in the surgical group.

The study found that among the patients treated:

- Fifteen feet in the Ponseti group had a recurrence requiring some

surgery. Four of these feet had a major recurrence and 11 had a minor recurrence.

- Fourteen feet in the surgical group required revision (follow-up) surgery.
- Only one foot in the Ponseti group required revision surgery.

Patients treated in both groups had a 30 percent to 40 percent rate of relapse. While this is a relatively high recurrence rate for both groups, feet in the Ponseti group needed significantly less invasive operative intervention and required less revision surgery. And for patients in the surgical group who required revision surgery, it was actually a repeat procedure, which has been shown in other studies to lead to poorer function.

"The case for Ponseti treatment is much stronger than for surgery considering Ponseti treatment involves less severe recurrence; and feet treated with too many surgeries have less favorable outcomes," said Dr. Halanski, who is now a practicing pediatric orthopaedic surgeon at the Helen DeVos Children's Hospital in Grand Rapids, Michigan and also clinical assistant professor in Department of Surgery and Pediatrics & Human Development, Michigan State University College of Human Medicine.

The Ponseti method has been adopted as the primary treatment for clubfoot at the children's hospital in New Zealand where the study took place.

"Any infant born with clubfoot should be taken to an orthopaedic surgeon specializing in pediatrics, preferably within the first few months of life," concluded Dr. Halanski. "While primary surgical treatment may still be required in select cases, we strongly advise any parent who

receives a recommendation for [surgery](#) as primary treatment to seek a second opinion."

About Clubfoot Clubfoot is a complex deformity in which the feet are twisted inward with the top of the foot where the bottom should be. This condition can sometimes be detected in a prenatal ultrasound, but always is readily apparent at birth. Despite successful initial treatment, clubfeet have a natural tendency to recur. Regardless of medical treatment option, bracing is necessary for several years post treatment to prevent relapses, almost constantly for a few months, then typically during sleep.

The study took place in New Zealand where clubfoot is more common, due to the heavy Polynesian population and the propensity for clubfoot among Polynesians. This study reviewed the two most common treatments of clubfoot:

- Ponseti method involves weekly manipulation with above-knee casting often followed by cutting of the Achilles tendon to correct the condition; bracing is then used to maintain the correction.
- Surgical correction involves lengthening of the Achilles tendon and release of the ankle joint, multiple joints in the foot, often with re-alignment and pinning of the bones in the foot.

Provided by American Academy of Orthopaedic Surgeons

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