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### Earlier surgical correction may improve TCC recurrence rates

**By Jordana Bieze Foster**

The total contact cast may be the gold standard for diabetic ulcer care, but outcomes associated with its use are far from ideal. Research from Switzerland provides additional evidence that recurrence rates following TCC treatment are unacceptably high, even when used in combination with patient education and custom footwear—suggesting that more aggressive management may be in order.

Following TCC treatment of 34 ulcers in 28 patients, investigators from the University Hospital Basel documented 26 recurrences in 16 patients during a mean follow-up period of 2.8 years. In addition, the researchers found 18 ulcers that were either on the contralateral foot or in a different location on the ipsilateral foot. The findings were published in the January issue of *Foot & Ankle International*.

Recurrent ulcers were seen in 57% of patients despite the fact that, after primary healing had been achieved, each patient was provided with custom-made orthopedic footwear, and educated about proper foot care during an initial adaptation period of close monitoring by a diabetic foot clinic. In addition, each patient received regular follow-up visits to a general physician every one to two months.

"The treatment is not finished when just an ulcer is healed. The rate of recurrence as well as the chance to develop a new ulcer is very high," said Arno Frigg, MD, an orthopedic surgeon at the university and lead author of the study. "This is a chronic medical problem like hypertension or the blood sugar itself that needs continuous treatment or follow-up."

Sixteen of the 26 recurrences were successfully treated with the TCC, but eight of those recurred again. Eight of the 26 recurrent ulcers and six of the new ulcers were associated with underlying foot deformities that were treated operatively; of the 13 patients who underwent surgery, 12 did not experience any new ulcerations before the end of the study.

Of the original group of 28 patients, recurrent and new ulcers following TCC treatment were more frequent in the 19 with foot deformities (14 cases) than in the nine patients without deformities (four cases). Because of the low recurrence rate in those whose deformities were treated surgically, Frigg and colleagues suggest that surgical correction of such deformities should be considered immediately after primary healing with the TCC, before recurrences or new ulcers can develop.

The authors are skeptical, however, that more aggressive educational efforts will significantly improve recurrence rates.

"Patient education is important. But in our study, patient information was good and did not prevent recurrences," Frigg said. "Patients know the measures, but do not follow them. It might be similar to smoking: every smoker knows that it is not healthy but continues to smoke anyway, because there is no immediate painful consequence."

Meanwhile, an Italian company has come up with a new twist on the "instant TCC" concept (see "'Instant' TCC could save time and money," August 2004, page 19) that research from the University of Pisa suggests is as effective as conventional TCC treatment.

The Optima Diab walker, manufactured by Molliter in Civitanova Marche, features a special plastic strap (similar to a hospital bracelet) that can be removed only by cutting it—thus theoretically avoiding the compliance problems associated with removable walkers.

Researchers randomized 40 patients with neuropathic plantar ulcers to receive either the TCC or the Optima Diab walker, and found no significant between-group differences in healing rates, healing time, or adverse event rates. The Optima device, however, cost 78% less than the TCC, and required 77% less time for application and 58% less time for device removal. The results were published in the March issue of *Diabetes Care*.