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## CLINICAL PRACTICE

## Clinical Images

## Anorexia Nervosa: Russell's Sign with Concurrent Tetany

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Figure 1. The dorsal aspect of the patient's hands revealed abrasions, callosities, and scarring.

A 32-year-old female with a history of binge-purge type anorexia nervosa presented with abdominal pain and weight loss of 8 kg over the preceding 2 weeks. She denied prior diuretic or laxative abuse. Physical examination showed a thin female with a BMI of 14.2 kg/m<sup>2</sup>. The dorsal aspect of her hands revealed abrasions, callosities, and scarring (Fig. 1). Her hands were contracted in tetany, flexed at the metacarpophalangeal joints, with extension at the interphalangeal joints with the thumb flexed and adducted (Fig. 2). Laboratory studies revealed a serum calcium of 5.3 mg/dl, albumin of 3.0 g/dl, and normal serum 25-hydroxyvitamin D and parathyroid hormone levels.



Figure 2. The patient's hands were contracted in tetany, flexed at the metacarpophalangeal joints, with extension at the interphalangeal joints with the thumb flexed and adducted.

Figure 1 demonstrates Russell's sign, with abrasions on the dorsum of the hand from contacting the incisors during self-induced vomiting<sup>1</sup>. This finding is reported in approximately 4% of patients with purging type anorexia nervosa<sup>2</sup>. Figure 2 shows an obstetrician or accoucheur's hand, demonstrating the resemblance of tetany to the position one's hand is held in while performing a vaginal delivery.

Tetany of the patient's hands resolved with electrolyte repletion. On endoscopic evaluation, her abdominal pain was found to be secondary to esophagitis, likely from self-induced vomiting.

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## REFERENCES

1. Russell G. Bulimia nervosa: an ominous variant of anorexia nervosa. *Psychol Med* 1979 Aug;9(3):429-48.
2. Strumia R, Varotti E, Manzato E, Gualandi M. Skin signs in anorexia nervosa. *Dermatology* 2001;203(4):314-7.

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