

One-shot dalbavancin infusion combined with vacuum-assisted closure of Crohn's anal fistulas

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Dear Editor,

There remains a high rate of recurrences after the treatment of Crohn's anal fistulas with abscesses (CFA), even more with the super infection of methicillin-resistant *Staphylococcus aureus* (MRSA). The patients are hospitalized on the same day either with multiple surgical interventions and the possible risk of damage to the anal sphincter or with conservative surgery in the form of incision and non-cutting drainage setons following the prolonged intravenous administration of antibiotics. That treatment delays introduction of the biological therapy. One-shot intravenous dalbavancin infusion combined with negative pressure drainage (VAC) of Crohn's anal fistulas may be an alternative to traditional methods (1,2).

Medical records of five patients with complex CFA accompanied with MRSA superinfection were retrospectively evaluated. Cultures showed MRSA sensitive to various antibiotics such as vancomycin, teicoplanin, linezolid, clindamycin, levofloxacin, ciprofloxacin, and dalbavancin. The incision of abscesses accompanying the fistulas in all the patients, curettage, and cauterization of fistulous tracts were followed with the application of VAC. A catheter wrapped with a regular polyurethane open-pored sponge was introduced into the fistulous tracts with abscess cavities and fixed to the adjacent skin with an adhesive foil. Lastly, an opening in the foil was made, and a negative pressure port was installed. During the treatment, a stable negative pressure of 100-150 mmHg was maintained. Afterwards, one-shot intravenous injection of dalbavancin was administered at 1500-mg dose. VAC was applied on average 3-4 times, every third or fourth day, and removed in

1-2 weeks if the inflammatory process receded. During each change, the size of the sponge was reduced with a shrinking abscess cavity and the catheter was gradually removed from the tract with the aim to collapse and finally close it. Infliximab administration was initiated in fortnight. The final healing time ranged from 1 to 6 months.

VAC may be an alternative to the traditional methods of treatment since any discharge is evacuated more effectively. Moreover, edema reduced, blood flow increased, wounds shrunk, and the formation of the fresh granulation tissue accelerated. VAC can also be defined as a sphincter-saving procedure since the anal sphincter is left intact (3). An extensive infection of the perianal skin accompanying CF requires the prolonged intravenous administration of antibiotics. Since the colon is the source of primary perianal infection in patients, ciprofloxacin is administered with metronidazole with good clinical result in most cases (4). However, there is a risk of super infection with MRSA in time. An alternative to comparable antibiotics against methicillin-resistant *S. aureus* administered at hospitals may be dalbavancin. It is a recently approved new-generation semisynthetic lipoglycopeptide that belongs to the same class as vancomycin and teicoplanin; however, it has a higher potency against Gram-positive bacteria. Its mechanism of action relies on the inhibition of the bacterial cell wall biosynthesis. Because it has a uniquely long elimination half-life, it can be intravenously administered in one shot at 1500-mg dose. Lastly, the penetration of dalbavancin into skin is good and long-lasting even after the above-mentioned short regimen (5).

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