

### Male genital edema in Crohn's disease

*To the Editor:* An otherwise superb account of the cutaneous manifestations of Crohn's disease is unfortunately incomplete because Thrash et al<sup>1</sup> have omitted genital presentations, particularly penile edema/lymphedema/granulomatous lymphangitis. Genital involvement is rare in Crohn's disease but can be encountered as genital ("knife-cut") ulcers, fistulae, fissures, abscesses, and genital edema.<sup>2</sup> In 20 years of specialized male genital clinical activity, I (C.B.B.) have diagnosed and managed the last situation about a dozen times. In some patients (over a third in my experience) it can be the first and only intimation of Crohn's disease, thus is an important pointer to gastrointestinal investigations and the confirmation or exclusion of Crohn's disease.<sup>3</sup>

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### Reply: Genital edema in Crohn's disease

*To the Editor:* In his letter to the editor, Dr Christopher Bunker draws attention to an important clinical finding of genital edema in Crohn's disease, which we omitted from our previous CME article titled "Cutaneous manifestations of gastrointestinal disease." Dr Bunker reports several cases of male genital edema as a sole finding in Crohn's disease in his clinic. In a letter published in the August 2011 *Journal of the American Academy of Dermatology*, Reinders et al<sup>1</sup> also reported a case of granulomatous lymphangitis that presented as asymptomatic penile

and scrotal edema in a patient with no known history of Crohn's disease. Although colonoscopy showed no histologic abnormalities, video capsule endoscopy demonstrated ulcerations in the ileum with subsequent development of diarrhea and bloody stools and diagnosis of Crohn's disease. Thus, genital edema preceded the development of Crohn's in this patient and was an important diagnostic clue as Dr Bunker correctly points out. Several other cases have also been reported in the literature of genital edema in Crohn's disease. It is important to note genital findings are not limited to male patients, but can also present as vulval edema in female patients. We appreciate Dr Bunker bringing this to our attention.

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### Tumor recurrence after Mohs micrographic surgery

*To the Editor:* We read with interest the article by Campbell et al<sup>1</sup> examining factors contributing to tumor recurrence after Mohs micrographic surgery (MMS). Although few studies have examined the role of surgeon error with tumor recurrence,<sup>2</sup> it is notable that in their study 26% (5/14) of recurrent lesions were found to have tumor at the margins of the MMS slides. Presumably, this resulted from the presence of dense inflammation on the slides, progression of actinic keratosis to squamous cell carcinoma in situ during the interval between initial and follow-up surgeries, poor slide quality, or other factors.<sup>3</sup> Although this percentage of residual tumor at the margins may seem surprisingly high to some readers, it is similar to that of our academic institution. This letter aims to draw further awareness to these potential sources contributing to MMS recurrences. In addition, we seek to highlight that the findings of

Campbell et al<sup>1</sup> are not merely limited to those of a single institution.

As part of the MMS quality-assurance protocol at Brown University, recurrent tumors are routinely logged and examined. We recently reviewed a total of 16 cases from 2005 through 2012 that were designated recurrent after previous MMS. These cases were selected based on availability of frozen-section slides and clinical photographs taken during the original MMS procedure and during treatment of the suspected recurrence. Critical examination of this information yielded several findings. In 1 case, a tumor labeled as recurrent was found to represent a different tumor type and location from the initial tumor treated. Thus, this lesion was reclassified as a separate primary. Further evaluation of clinical photographs revealed that 4 other tumors designated as recurrent may actually represent distinct primary lesions adjacent to and not overlying the initial surgery site. Histologically, 2 of these 4 lesions were infiltrative basal cell carcinomas. Compared with nodular basal cell carcinomas, infiltrative tumors typically present with more subclinical extension and skipped areas extending in a jagged and/or deeply infiltrative pattern.<sup>4</sup> It is possible that even though clinical photographs suggested that the tumor was a second primary located adjacent to the initial site of surgery, a skipped area in the tissue resulted in clear margins on the initial surgery.

Of the tumors considered definitive recurrences corroborated by clinical photographs and histology (n = 11), 2 lesions (18%) were found to have residual tumor at the margin on the initial surgery. This percentage is significantly higher than the previously cited 2.8% in the general MMS population of cleared tumors,<sup>5</sup> but is approaches that of the population of Campbell et al<sup>1</sup> of recurrent tumors. Three lesions (27%) in our cohort had either missing epidermis or dermal/subcutaneous tissue drop-out on the slides, which could lead to false interpretation of margin clearance. Our cohort also consisted predominately of basal cell carcinomas (n = 9).

In the context of these findings, it may be difficult to draw definitive conclusions based on our small sample size. However, we sought to draw increased awareness to factors contributing to tumor recurrences after MMS. Furthermore, quality-assurance protocols reviewing recurrent tumors may be helpful to the Mohs surgeon in determining reasons for recurrence.

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#### Surgeon error and slide quality during Mohs micrographic surgery: Is there a relationship with tumor recurrence?

*To the Editor:* We would like to thank Dr Lee and colleagues for their comments and additional data regarding our study on slide quality and interpretation errors during Mohs micrographic surgery.<sup>1</sup> Their findings of an 18% incidence of unexcised marginal tumor in their recurrent Mohs tumors is in the realm of our incidence of 26% and that of Hruza<sup>2</sup> (20%). In addition, the 27% incidence of missing epidermal and/or subcutaneous drop-out of Lee et al also approximated our 21% finding. These data further emphasize the consequences of persistent tumor, and the possibility that the already excellent cure rate of Mohs micrographic surgery can be improved with more meticulous slide review. In addition, the high incidence of dermal tissue drop-out further validates this often-overlooked slide quality metric. Many focus exclusively on obtaining a complete epidermal margin, but missing dermal tissue also appears very important. We agree with Lee et al that a continuing quality improvement program might be a useful means to improve or maintain quality slide preparation and interpretation.

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