

## Mechanical Stress as a Cause of Hidradenitis Suppurativa: A Lesson from a Patient with a Monster Hernia

We have read with great interest the case report recently published in *Acta Dermatovenerologica Croatica* by Boer and Mihajlovic (1), which describes a 33-year-old woman with an 18-year history of classic hidradenitis suppurativa (HS) who developed HS-like lesions at the position of the bra strap.

We agree with Boer and Mihajlovic: according to our clinical experience, we are convinced that mechanical stress may contribute or, in some cases, result in the development of HS. In this regard, we will describe the case of a patient with a monster hernia who presented HS-like lesions on his abdomen corresponding to the perihernial skin area, suggesting that mechanical stress was an important pathogenic factor for HS development.

A 54-year-old man without any previous history of HS developed chronic, recurrent, inflammatory nodules, cysts, and depressed scars at the location of a giant abdominal hernia (Figure 1). The lesions occurred four years ago, six months after the hernia had reached its current size. Cultures from skin swabs showed commensal skin flora and moderate mixed anaerobic bacteria, as would be expected in HS lesions. No lesions occurred in other inverse areas generally affected by HS, such as the axillary and anogenito-crural regions.

It is likely that the mechanical stress in the abdominal region was greater than the one occurring at the other folds due to the pressure of the trousers and belt. In fact, there are many kinds of mechanical stress: friction, pressure, pulling, tension, and pinching. Friction can be defined as the resistance to motion in the direction of the common boundary of the two surfaces. The body areas which are at greater risk for such frictional forces are mainly the skin folds, such as axillae, groins, and buttocks. There is a substantial difference between frictional and pressor stress: pressure is defined as the force per unit exerted parallel to the plane of interest. Pressure on the skin can be caused by tight dressings (2). Frictional and pressor

forces can act concurrently and synergistically, starting the series of events that lead to clinical onset of HS, as most likely happened in our patient at the abdomen right below the hernia, where the trousers and belt are tightened.

It is believed today that the primary event in HS is follicular inflammation: in predisposed subjects, folliculitis can develop into HS. Follicular enlargement has been observed in HS skin. It has been hypothesized that constant mechanical forces, such as pressure and friction, may lead to follicular occlusion, dilatation, microtears, and ruptures with ensuing abscesses (1-6).



**Figure 1.** Inflammatory nodules, cysts, and depressed scars on the abdomen just below a giant hernia, where the trousers and belt are tightened.

This case report corroborates observations from the last three decades: HS is a disease of the follicular epithelium rather than the apocrine glands (7,8), and mechanical stress, friction, and pressure may have an important role in its pathogenesis.

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