



Equestrian cold panniculitis in a cold-storage-room worker

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| Keywords: | chilblain, cold-associated perniosis, equestrian perniosis, panniculitis, pernio |
| Abstract: | <p>Equestrian cold panniculitis (ECP), also called "equestrian perniosis" and "cold-associated perniosis of the thighs", was originally described in 1980 as a cold-induced panniculitis on the upper thighs of overweight young women who wore tight-fitting non-insulated pants during equestrian activities in winter. We report a case of ECP induced by work in a cold-storage room.</p> <p>A 41-year-old generally healthy woman presented with nodular swelling with pain in her thighs and the tibial side of her left knee. Laboratory examinations, including for serum antinuclear antibody, anti-SS-A, SS-B, Jo-1, RNP, Sm, aminoacyl-tRNA synthetase (ARS) and cyclic citrullinated peptide (CCP) antibodies, and rheumatoid factor, showed no abnormal findings. She reported having similar episodes three times a year, in winter. A punch biopsy from the nodular lesion on the right thigh showed inflammatory infiltration of lymphocytes and histiocytes in the deep dermis and the subcutaneous fat tissue. She is an employee of a delivery company and frequently works in a cold-storage room. She occasionally experienced recurrence of the symptoms after her cold-storage-room work, especially in winter. We diagnosed her skin lesions on the legs, mainly on the thighs, as equestrian cold panniculitis. We recommended that patient minimize her cold exposure and dress warmly during her cold room work. The symptoms have not recurred. The present case suggests that triggers for ECP are not limited to outdoor activities, but that ECP may be induced by work in a cold-storage room.</p> |

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15 **Equestrian cold panniculitis in a cold-storage-room worker**

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54 panniculitis, pernio

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6 Dear Editor,
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9 Cold-induced panniculitis was first reported more than 50 years ago.¹

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12 Equestrian cold panniculitis (ECP), also called “equestrian perniosis” and
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15 “cold-associated perniosis of the thighs”, was originally described in 1980 as
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18 a cold-induced panniculitis on the upper thighs of overweight young women
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21 who wore tight riding pants during equestrian activities in the winter.^{2, 3}

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24 The lesions usually resolve spontaneously within a few days to weeks with
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27 pigmentation.⁴ We report a case of ECP induced by work in a cold-storage
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30 room.
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36 A 41-year-old generally healthy woman presented with recurrent nodular
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39 swelling with burning pain in her thighs for the previous 4 years. She
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42 reported that the lesions would usually resolve within 2-3 weeks with
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45 pigmentation. Three days before her first visit to our hospital, she noticed
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48 painful eruptions on her legs. Initial physical examinations revealed
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51 nodular swelling with pain in her thighs (Fig. 1) and the tibial side of her
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54 left knee. Laboratory examinations, including for serum antinuclear
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57 antibody, anti-SS-A, SS-B, Jo-1, RNP, Sm, aminoacyl-tRNA synthetase
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6 (ARS) and cyclic citrullinated peptides (CCP) antibodies, and rheumatoid
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9 factor, showed no abnormal findings. The lesions were treated with only
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12 topical steroid and resolved in three weeks. She reported having similar
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15 episodes three times a year, in winter. The patient had no history of thrombosis,
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18 surgical operation, or long-distance flying/driving. She was not on any medications,
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21 including steroids or hormone therapies. A punch biopsy from the nodular lesion
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24 in the right thigh showed inflammatory infiltration of lymphocytes and
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27 histiocytes in the deep dermis and the subcutaneous fat tissue. Neither
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30 apparent vasculitis, fibrinoid necrosis of the vessel walls, nor mucin
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33 deposition was seen. By magnetic resonance imaging (MRI), the
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36 subcutaneous fat tissue in the lesions of her thighs showed slightly high
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39 short tau inversion recovery (STIR) signal intensity, suggesting
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42 panniculitis. She is an employee of a delivery company and frequently works
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45 in a cold-storage room. She occasionally experienced recurrence of the
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48 symptoms after her cold-storage-room work, especially in winter. During her
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51 cold-storage-room work, the patient had worn tight-fitting, non-insulated
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54 pants, although she had worn loose, warm, multi-layered clothing on the
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57 upper body. From the information on the working environment as well as
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6 the clinical and histological features, we diagnosed the skin lesions as
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9 equestrian cold panniculitis. We recommended the patient minimize her
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12 cold exposure and dress warmly during her cold-storage-room work. The
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15 symptoms have not recurred.
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21 ECP has been reported to be induced not only by horse riding, but also by
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24 cold exposure associated with other outdoor activities, including wading
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27 across cold rivers and motorcycle riding.⁵ The present case suggests that
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30 triggers for ECP are not limited to outdoor activities, but that ECP may be
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33 induced by work in a cold-storage room. In such cases, reducing the cold
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36 exposure and dressing warmly might prohibit the disease recurrence, as
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39 seen in the present patient. In this context, correct diagnosis and
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42 elucidation of environmental risk factors are important for the prohibition of
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45 ECP, especially in patients who are unaware of the causes of ECP.
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Figure legends

Figure 1. Clinical and histopathological features of the present case at 3 days after the onset of painful nodular swelling on the thighs. (a) Erythematous nodules are seen in the pale, anemic area (yellow arrows) on the lateral side of the right thigh. (b) Diffuse erythema (yellow arrows) is observed on the lateral side of the left thigh. (c) Inflammatory cell infiltration is seen in the subcutaneous tissue (hematoxylin-eosin, original magnification x10). (d) Dense infiltration of inflammatory cells, mainly lymphocytes and histiocytes, is observed around the blood vessels, and destruction of the fat tissue is seen. No apparent vasculitis is observed (hematoxylin-eosin, original magnification x200).

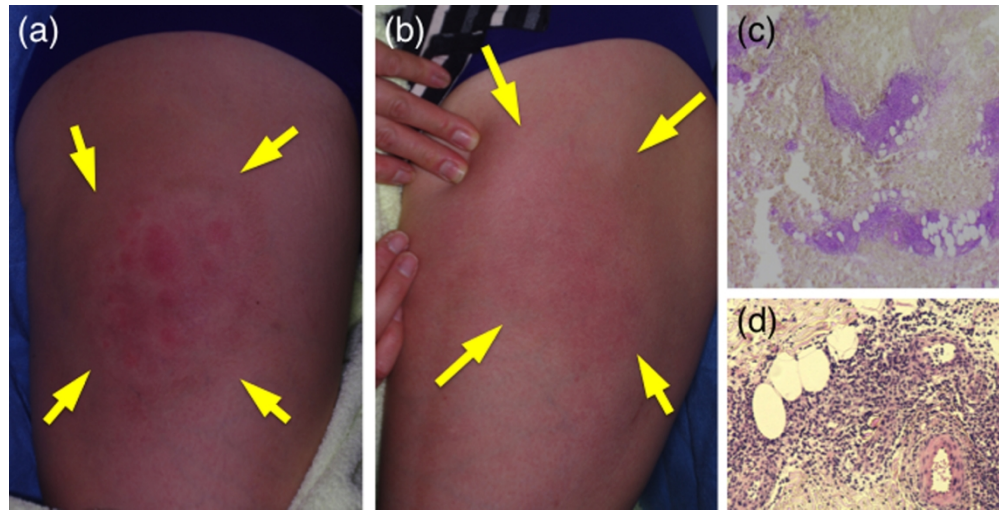


Figure 1. Clinical and histopathological features of the present case at 3 days after the onset of painful nodular swelling on the thighs. (a) Erythematous nodules are seen in the pale, anemic area (yellow arrows) on the lateral side of the right thigh. (b) Diffuse erythema (yellow arrows) is observed on the lateral side of the left thigh. (c) Inflammatory cell infiltration is seen in the subcutaneous tissue (hematoxylin-eosin, original magnification x10). (d) Dense infiltration of inflammatory cells, mainly lymphocytes and histiocytes, is observed around the blood vessels, and destruction of the fat tissue is seen. No apparent vasculitis is observed (hematoxylin-eosin, original magnification x200).

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